

Appendix B

Colonial Waterbird and Rookery Island Management Plan

[Note: The attached plan has been reduced to include only sites relevant to the project and in the project area. This extends from the JFK Causeway to PA 240 at Port Isabel. The only exception to this reduction is in the "Island Name Cross Reference Table," which was left intact.]

PRELIMINARY

Colonial Waterbird and Rookery Island
Management Plan

July 2003

By Allen Chaney, Ph.D. and Gene W. Blacklock
for the
Coastal Bend Bays & Estuaries Program

The Colonial Waterbird and Rookery Island Management Plan is a partnership effort of the Coastal Bend Bays & Estuaries Program, Gulf of Mexico Program, US Fish & Wildlife Service and Texas Audubon Society. Requests for copies of this plan should be addressed to:

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This project supports the following action items in the Implementation Strategy for the Coastal Bend Bays Plan:

- HLR-1** *Preserve functional, natural habitats*
- HLR-2** *Create new habitats and/or restore degraded habitats where feasible*
- HLR-4** *Develop management plans to ensure sustainability for species of concern*
- HLR-10** *Develop management plans to minimize introductions and impacts from non-native species*
- BTR-3** *Develop and implement management strategies to reduce or avoid impacts from recreational uses (related actions BD1)*

PRELIMINARY

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Preface

The preliminary draft of the *Colonial Waterbird and Rookery Island Management Plan* includes field observations and management recommendations based on historical surveys up to and including summer 2001 bird counts. The plan encompasses 186 rookery islands along the central and lower Texas coast.

The report is the first iteration of the Rookery Island Management Plan described in the Coastal Bend Bays & Estuaries Program's workplan. The purpose is to characterize coastal rookeries, identify habitats and impacts, and to summarize historical population trends. Site-specific recommendations provide resource managers with strategies to improve waterbird breeding success.

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The report was compiled and edited by Douglas H. Baker, Digital Information Design.

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List of Acronyms

AWPE	White Pelican
BCNH	Black-Crowned Night-Heron
BLSK	Black Skimmer
CAEG	Cattle Egret
CATE	Caspian Tern
COTE	Common Tern
FOTE	Forster's Tern
GBHE	Great Blue Heron
GBTE	Gull-Billed Tern
GIWW	Gulf Intracoastal Waterway
GREG	Great Egret
LAGU	Laughing Gull
LBHE	Little Blue Heron
LETE	Least Tern
PAIS	Padre Island National Seashore
REEG	Reddish Egret
ROSP	Roseate Spoonbill
ROYT	Royal Tern
SATE	Sandwich Tern
SNEG	Snowy Egret
SOTE	Sooty Tern
TRHE	Tri-Colored Herons
WFIB	White-Faced Ibis
WHIB	White Ibis

Island Name Cross Reference Table

Colony	Latitude	Longitude	Old Name	New GIWW Marker	Old GIWW Marker
614-383a			(3) SB	43	
614-383b	27.195797	-97.42521	(4) SB	41a	
614-383c	27.197599	-97.425017	(5) SB	41	
614-383d	27.200389	-97.424535	(6) SB	39	
614-384a	27.178802	-97.427669	(1) SB	49	
614-384b	27.181635	-97.428344	(2) SB	47	
614-382a	27.204294	-97.42357	(7) SB	35a	
614-382b	27.206998	-97.422654	(8) SB	35	
614-380a	27.221589	-97.419711	9	29	
614-380b	27.22182	-97.419641	10	33	
614-380c	27.22425	-97.418745	11	27	
614-380d			12	25A	
614-380e	27.227962	-97.418335	13	25	
614-380f	27.229099	-97.418191	14	23A	
614-380g	27.230902	-97.417225	15	23	
614-380h	27.232533	-97.416694	16	21A	
614-380i	27.235279	-97.416212	17	21	
614-380j	27.236738	-97.416115	18	19A	
614-380k	27.23794	-97.415922	19	19	
614-363	27.368439	-97.382463	36	178	86
614-362a	27.246952	-97.414016	20	17A	
614-362b	27.243347	-97.414692	21	17	135
614-362c	27.250385	-97.408415	22	15A	133A
614-362d	27.251415	-97.405519	23	15B	133B
614-362e	27.251072	-97.403201	24	15C	133C
614-361a	27.285882	-97.405554	25	221	117
614-361b	27.291031	-97.40492	26	219	113
614-361c	27.295779	-97.404015	27	217	111
614-361d	27.298837	-97.403562	28	215	109
614-361e	27.303343	-97.402567	29	213	107
614-361f	27.306561	-97.40139	30	211	105
614-361g	27.30978	-97.400937	31	209	103
614-364a	27.327	-97.392152	32	199A	
614-364b	27.325712	-97.390522	33	199B	
614-364c	27.324344	-97.388438	34	199C	
614-360	27.348242	-97.38391	35	187	91
614-347	27.378578	-97.370592	37	169	85
614-345	27.391854	-97.363433	38	163	81
614-346	27.403763	-97.356997	39	157	75
614-348	27.416718	-97.358722	(40) NB	154	None

Island Name Cross Reference Table (cont.)

Colony	Latitude	Longitude	Old Name	New GIWW Marker	Old GIWW Marker
614-344	27.422189	-97.356093	41	152	72
614-343	27.433455	-97.342222	42	141	69
614-343A	27.189703	-97.426609			
614-342a	27.452202	-97.332062	43	131	65
614-342b	27.459364	-97.328254	44	127	63
614-341a	27.4794	-97.318278	45	117	57A
614-341b	27.482538	-97.316464	46	115	57
614-341c	27.486481	-97.314559	47	113A	55A
614-341d	27.489458	-97.313108	48	111	55
614-340	27.492685	-97.305742	49		
614-306	27.520494	-97.290352	50		
614-305g	27.525644	-97.294127	57	93	43
614-305f	27.521954	-97.295772	56	95	45
614-305e	27.519121	-97.296933	55	97	47
614-305d	27.516375	-97.298772	54	97A	47A
614-305c	27.513113	-97.299934	53	101	49
614-305b	27.510538	-97.301289	52	101A	49A
614-305a	27.507277	-97.302741	51	103	51
614-304b	27.534592	-97.297744	59	90	42
614-304a			58	92	42
614-302b	27.556425	-97.277777	61	79	37
614-302a	27.554183	-97.286298	60	80	42
614-301c	27.586659	-97.261926	64	63	33
614-301b	27.566221	-97.278176	63	72	34
614-301A	27.569761	-97.270854	62	73	37
614-300l	27.602463	-97.28756	76		
614-300k	27.598901	-97.280609	75		
614-300j	27.597356	-97.277219	74		
614-300i	27.601347	-97.275476	73		
614-300h	27.605639	-97.272475	72		
614-300g	27.602248	-97.270828	71		
614-300f	27.597613	-97.273153	70		
614-300e	27.595811	-97.273684	69		
614-300d	27.595124	-97.270392	68		
614-300c	27.593665	-97.267728	67		
614-300b	27.592678	-97.264484	66		28
614-300a	27.591166	-97.259746	65	59	29
614-240k	27.681384	-97.221127	116	13	
614-240j	27.676706	-97.223258	115	15	
614-240i	27.671857	-97.225148	114	17	
614-240h	27.666364	-97.225535	113	19	
614-240g	27.662802	-97.227086	112	21	
614-240f	27.660055	-97.228152	111	23	

Island Name Cross Reference Table (cont.)

Colony	Latitude	Longitude	Old Name	New GIWW Marker	Old GIWW Marker
614-240e	27.657952	-97.228491	110	23A	
614-240d	27.654819	-97.230284	109	25	
614-240c	27.647352	-97.231349	108	29	
614-240b	27.643704	-97.232172	107	31	
614-240a	27.635679	-97.235321	106	35	15
614-222z	27.632031	-97.276378	102		
614-222y	27.641473	-97.267731	101		
614-222x	27.630701	-97.280883	100		
614-222w	27.636108	-97.269717	99		
614-222v	27.636881	-97.271461	98		
614-222u	27.621903	-97.272406	97		
614-222t	27.62362	-97.27478	96		
614-222s	27.625294	-97.276572	95		
614-222r			94		
614-222q	27.624907	-97.272794	93		
614-222p	27.626495	-97.271583	92		
614-222o	27.628942	-97.270178	91		
614-222n	27.632841	-97.268047	90		
614-222m			89		
614-222l	27.63937	-97.263807	88		
614-222k	27.640486	-97.259058	87		
614-222j	27.642202	-97.261917	86		
614-222i	27.636838	-97.262159	85		
614-222h	27.646494	-97.259544	84		
614-222g	27.65173	-97.26153	83		
614-222f	27.635615	-97.249035	82		
614-222e	27.635121	-97.24826	81		
614-222d	27.634692	-97.247268	80		
614-222cc	27.648425	-97.261869	105		
614-222c	27.634263	-97.246396	79		
614-222bb	27.650056	-97.266035	104		
614-222b	27.633576	-97.245524	78		
614-222aa	27.644906	-97.263904	103		
614-222a	27.633061	-97.244046	77		
614-221s	27.657695	-97.250979	135		
614-221r	27.660484	-97.260572	134		
614-221q	27.668252	-97.259458	133		
614-221p	27.670441	-97.258343	132		
614-221o	27.663059	-97.254516	131		
614-221n	27.646751	-97.247732	130		
614-221m	27.646279	-97.243032	129		
614-221l	27.654219	-97.247829	128		
614-221k	27.653489	-97.242015	127		

Island Name Cross Reference Table (cont.)

Colony	Latitude	Longitude	Old Name	New GIWW Marker	Old GIWW Marker
614-221j	27.658038	-97.245407	126		
614-221i	27.662973	-97.246618	125		
614-221h	27.663875	-97.248604	124		
614-221g	27.668681	-97.251851	123		
614-221f	27.670612	-97.248459	122		
614-221e	27.6722	-97.250058	121		
614-221d	27.674303	-97.251415	120		
614-221c	27.675633	-97.253886	119		
614-221b	27.685633	-97.238718	118		
614-221a	27.677822	-97.239396	117		
614-605D	27.516375	-97.298772			

Introduction

Colonial waterbird and coastal shorebird populations are key environmental indicators of estuary health and productivity. They represent the top of the food chain and reflect the system's overall health. Additionally, communities along the Texas coast enjoy economic benefits from the increasing popularity of birding ecotourism – especially colonial waterbirds. However, along the central and lower Texas coasts recent studies show a dramatic decline in certain colonial waterbird populations.

The *Colonial Waterbird and Rookery Island Management Plan* includes field observations and broad, site-specific recommendations for 186 rookery sites extending from the Land Cut in the Laguna Madre northward to Aransas Bay. Many sites were originally created through deposition of dredge material. Some of these have developed into productive habitat for colonial waterbirds while others have eroded and are now inundated. Other factors affecting breeding success include availability of appropriate ground cover and substrate, impacts from recreational activities and human disturbance, predation by fire ants, snakes, raccoons and coyotes, and competition among birds for limited nesting space.

The plan identifies management strategies for restoring, enhancing and protecting waterbird habitat. The recommendations are designed to achieve the following objectives:

- Sustain healthy colonial waterbird species populations and habitats;
- Identify prospective areas for rookery island creation and enhancement
- Identify impacts to avian resources; and
- Provide management actions to minimize or eliminate impacts to colonial waterbird populations and habitat.

About this Plan

Rookery islands are organized according to US Fish & Wildlife Service's naming convention for waterbird colonies. Historical names for each island are also shown. The Island Name Cross Reference Table provides a reference for the old and new rookery island naming systems. Data from bird surveys for each site indicate the number of nesting bird pairs between 1997 and 2001. The acronyms used in the bird surveys are listed on page viii.

Rookery Islands

Island 614-384A

Old Name: (1) SB-NM49

Location

Latitude: 27.1788 **Longitude:** -97.4277 **Area:** N/A **Elevation:** 1.1 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: three cabins

Predators: fire ants and humans

Substrate types: serpulid and coquina reef limestone rock and cobble, large and small shell, sand with little silt

Summary: This is the first island north of the Land Cut for which there are records of nesting colonial waterbirds. It is a part of a chain of small islands on the eastern side of the Gulf Intracoastal Waterway (GIWW) that stretches from the Land Cut to Baffin Bay. They are all excellent for nesting because they are distantly removed from land and, therefore from predators. Unfortunately, most of the larger islands support cabins for human recreation.

This island is long and narrow with three vegetated areas connected by sand spits. There are three cabins on the central portion and one on the southern end. East of the cabins are two large pits containing brackish water and a stand of cordgrass in which there are scattered clumps of prickly pear and the remains of some small spreading mesquite. Additionally, there is sea oxeye, false ragweed, saltgrass, shoregrass, evening primrose and pigweed on the higher slopes. These grade into the halophytes around the margins and extend out into the sand spits. The small isolated island to the east is connected to the main island by a band of rocky material, visible at low tide. The crown of this island is mostly prickly pear with some grasses and sea oxeye.

Bird Survey 1997 – 2001

614-384A	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
GBHE	2			6	3
TRHE					28
SNEG				2	32
REEG	1			4	8
CAEG				1	
ROYT				26	
SATE				70	
GBTE				35	25
LETE				8	
BLSK			24	90	18

614-384A	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
LAGU	10		28	52	41

Nesting/Use History

Individual records for this island began in 1986. Nesting pairs were not reported until one pair of black skimmers was observed on one of the sand spits in 1995. Two pair of great blue herons appeared in 1996, and were joined by a pair of reddish egrets in 1997. The great diversity of nesters appeared in 2000 when the terns, black skimmers and laughing gulls occupied the sand spits. The herons and egrets used the vegetation on the isolated eastern island. Human activity on the island must have been reduced that year. Tri-colored herons appeared in 2001 and were found in the higher vegetation throughout the main island.

Discussion and Management Recommendations

This is an ideal island for colonial waterbirds. Recommendations:

1. Remove cabins and replace with mesquite trees.
2. Cabin owners should be notified to stay away from the sand spits and the isolated island.
3. Cabin owners should be notified to restrict their activity to a minimum during the nesting season.

Island 614-384B

Old Name: (2) SB-NM47

Location

Latitude: 27.1816 **Longitude:** -97.4283 **Area:** N/A **Elevation:** 1.0 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: one cabin, remains of a plywood shack, dilapidated pier

Predators: fire ants

Substrate types: serpulid and coquina reef rock and cobble, shell and sand

Summary: This island was once connected to the previous island (614-384A), and at very low tides the connection is exposed. A sand spit on the south end connects to two higher, old dredged material deposits. The crown of the first deposit contains a pit surrounded by cordgrass and saltgrass. Prickly pear is present and sea oxeye is distributed on the northern portion of the crown. This grades into the more halophytic species that fringe the margin of the vegetation. The second and more northern deposit contains the remains of a cabin, a dilapidated pier, and a plywood shack that has no number. The vegetation there consists of camphor daisy, evening primrose, sea oxeye, saltgrass, shoregrass, false ragweed, pigweed and halophytes.

Bird Survey 1997 – 2001

614-384B	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
GBTE				1	
BLSK	3		4	2	
LAGU	6			56	

Nesting/Use History

The first recorded instance of birds nesting on this island occurred in 1988 when gull-billed terns, black skimmers and laughing gulls were counted. No further nesting was recorded until 1997 when black skimmers and laughing gulls were observed. Although the island was occupied in 2000, mostly by laughing gulls, no nesting occurred in 2001. Many human tracks between this and its neighbor (614-384A) have been observed.

Discussion and Management Recommendations

This could be made into an excellent island for all types of birds. There is a good foundation of rock for deposition on this island. Recommendations:

1. Remove the remains of the cabin and plywood shack.

2. Deposit dredge material on the northern end and provide containment to the east and north.
3. Establish trees to attract herons and egrets.
4. Post signs to prohibit human activity during nesting season.

Island 614-383A

Old Name: (3) SB-NM43

Location

Latitude: 27.1897 **Longitude:** -97.4266 **Area:** N/A **Elevation:** 0.0 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: one cabin and fishing pier

Predators: none

Substrate types: serpulid and coquina reef limestone rock and cobble, sand and little shell

Summary: This is a very low island that is subject to flooding during high tides. On the northern end there is one cabin on piers – the roof and associated fishing pier are in disrepair. Evidently, the original island has slowly eroded leaving only the small remnant.

Bird Survey 1997 - 2001

614-383A	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
GBTE	21	13			
BLSK	33	30			
LAGU		4			

Nesting/Use History

Laughing gulls were found nesting here in 1992 and 1998. The only other nesting was by gull-billed terns and black skimmers in 1997 and 1998. They were probably unsuccessful if a high tide occurred.

Discussion and Management Recommendations

A good foundation is present and proper deposition of dredged material could create a new island. Recommendations:

1. Although the island is in an ideal location, the recommendation is to let it erode away.
2. If material is deposited, some kind of containment is recommended. The cabin should be removed to reduce human interference with nesting birds.

Island 614-383B**Old Name:** (4) SB-NM41A**Location****Latitude:** 27.1957 **Longitude:** -97.4258 **Area:** N/A **Elevation:** 0.75 m**Length:** N/A **Width:** N/A**Description****Ownership:** Texas General Land Office**Impacts:** N/A**Predators:** none**Substrate types:** serpulid and coquina reef limestone rock and cobble, small shell and sand**Summary:** This low, crescent-shaped island is situated in an ideal location. It is surrounded by bare sand and shell with a central core of low halophytic vegetation. The high point of the island is in the northeast corner where it gradually slopes to the west.**Bird Survey 1997 - 2001**

614-383B	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
REEG		1			
ROYT					
SATE					
FOTE					
GBTE	11				4
LETE					
BLSK	19	34		1	40
LAGU	35	77			

Nesting/Use History

This island has been a good for species that nest on bare sand or in sparsely vegetated areas. Gull-billed terns, black skimmers and least terns were first observed here in 1984 when individual island counts began. The least terns never attempted to nest here again. Forster's terns appeared in 1987 and 1988, but were not observed later. Royal terns used the site from 1991 to 1995 and Sandwich terns joined them from 1993 to 1995. Black skimmers have consistently used the island except for 1999.

Discussion and Management Recommendations

Recommendations:

1. The target species for this island should be terns and skimmers.
2. The island could be enhanced with the deposition of additional dredged material. Containment should be provided.
3. Vegetation growth should be monitored and any excess removed.

Island 614-383C**Old Name:** (5) SB-NM41**Location**

Latitude: 27.1976 **Longitude:** -97.425 **Area:** N/A **Elevation:** 1.1 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** one cabin and pier**Predators:** fire ants**Substrate types:** serpulid and coquina reef limestone rock and cobble, small shell and sand

Summary: This is a small, well-vegetated island with a single cabin just southeast of the center. There is a pier that extends to the northwest toward the GIWW. The island's foundation is very good and the bare areas of sand and shell are loose and not compacted. The vegetation on the higher elevations consists of saltgrass, false ragweed, primrose, pigweed and sea oxeye. There are large areas of bare sand that could support skimmers.

Bird Survey 1997 - 2001

614-383C	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
GBHE					
TRHE					
SNEG					
REEG					
ROYT					
SATE					
GBTE				17	
BLSK			6	6	3
LAGU				1	

Nesting/Use History

The first individual records were collected in 1984 when the island was used by tri-colored herons, snowy egrets, gull-billed terns, black skimmers and laughing gulls. Tri-colored herons were especially abundant with 53 pair observed. The herons and egrets continued to occupy the island until 1992, and two pair of each reappeared in 1996. Five reddish egrets were present in 1991 as were great blue herons in 1992 and 1996. No herons or egrets reappeared. Royal terns in 1990 and 1992 and Sandwich terns in 1990 joined the bare-ground and sparse vegetation-nesters. The original three ground-nesters continued to intermittently use the vegetation and bare ground until 2000. Only three pair of skimmers attempted to nest here in 2001. The absence of skimmers in some years could be due to cabin owner activity.

Discussion and Management Recommendations

Human activity appears to be a limiting factor for nesting birds. The cabin is well-constructed and appears to be heavily used. Recommendations:

1. The island is presently only good for skimmer nesting.
2. Cabin owners should be made aware of the island's natural history and asked to restrict their activity outside the cabin.
3. If the cabin were destroyed, this island could be combined with island 614-383B and formed into a much larger one. Fresh dredge material and containment would be required.

Island 614-383D

Old Name: (6) SB-NM39

Location

Latitude: 27.2004 **Longitude:** -97.4245 **Area:** N/A **Elevation:** 0.15m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: none

Substrate types: serpulid and coquina reef limestone rock and cobble, sand and shell

Summary: Evidently, this was once a vegetated island but it has since eroded away, leaving only bare rocks and cobble.

Bird Survey 1997 - 2001

614-383D	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
TRHE					
SNEG					
REEG					
GBTE					
BLSK					2
LAGU					

Nesting/Use History

The primary nesters since 1984 have been gull-billed terns, black skimmers and a few laughing gulls. The herons and egrets, found only in 1991 and 1992, may have been recorded for the wrong island.

Discussion and Management Recommendations

This site is isolated and disturbed only by wading fishermen. Recommendations:

1. New material could enlarge the island and containment should be provided.

Island 614-382A

Old Name: (7) SB-NM35A

Location

Latitude: 27.2043 **Longitude:** -97.4236 **Area:** N/A **Elevation:** 0.6 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: metal cabin, outhouse and pier

Predators: fire ants

Substrate types: serpulid and coquina reef limestone rock and cobble, shell and some sand

Summary: This small island is narrowly separated from its northern neighbor by a stretch of water. There is a fair amount of bare sand and shell around a central core of vegetation. A metal cabin is found on the eastern side with an outhouse on the western high point of the island. A pier extends into the deeper water to the south. The northern bar is composed primarily of serpulid cobble and shell. The vegetation is primarily various halophytes.

Bird Survey 1997 - 2001

614-382A	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
TRHE					
GBTE		4			
BLSK		38		11	
LAGU					

Nesting/Use History

Forty-two laughing gulls, nine black skimmers and a single pair of tri-colored herons nested here in 1984. The herons never returned and the skimmers and gulls have used the island intermittently ever since. Four gull-billed terns tried nesting here in 1998.

Discussion and Management Recommendations

Recommendations:

1. The cabin users should be made aware that skimmers possibly nest on the northern bar.
2. Management for birds requires removal of the shack and the addition of dredged material.

Island 614-382B**Old Name:** (8) SB-NM35**Location**

Latitude: 27.207 **Longitude:** 97.4227 **Area:** N/A **Elevation:** 1.8 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** six cabins, outhouses and piers**Predators:** fire ants**Substrate types:** serpulid and coquina reef limestone rock and cobble, shell and sand

Summary: This is one of the larger islands in this chain and has changed very little since 1996, with the exception of the westward extension of the southern sandbar. The western area includes six cabins with associated outhouses and five piers. A single pier extends from the left side. The area southwest of the cabins is heavily vegetated, but less so toward the south. The southern area contains a dense growth of sea oxeye, prickly pear and false ragweed. Near the cabins there is cordgrass, saltgrass and sandbur. The eastern higher side of the island is not as densely covered as the southern area. It contains some cordgrass, sea oxeye and scattered patches of prickly pear, camphor daisy and guinea grass. These all grade into halophytes at the water's edge. The northern extension is more vegetated than the southern one with good stands of pigweed, sea purslane, *Batis* and glasswort.

Bird Survey 1997 - 2001

614-382B	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
GBHE	4				
TRHE	26		8	32	5
GREG	4				
SNEG	20		2	3	2
REEG	12	2	4	6	
CAEG	2				
ROYT					
GBTE		14			8
LETE		1			
BLSK	115	100	75	80	89
LAGU	245	182	206	231	217

Nesting/Use History

In spite of the cabins and human activity, this has been a good island for a variety of colonial waterbirds. Fifty-six pair of both tri-colored herons and laughing gulls, and one pair of

skimmers were recorded in 1984. From that point forward, there was a steady increase in the number of species and pairs, until recently. This could be due to increased human activity and the construction of the eastern pier. Most heron and egret nesting has occurred in the dense growth on the southern and southeastern area of the island. Terns and skimmers have occupied the two extensions, the southern one especially by skimmers. Laughing gull nests have been distributed throughout the vegetated areas.

Discussion and Management Recommendations

Recommendations:

1. The cabin users should be educated about the nesting history of the island.
2. The eastern pier should be abandoned.
3. Humans should refrain from excessive use of the southern and eastern region of the island from April – July.
4. Human activity should be completely avoided on the north and south extension from April – July.
5. Remove the houseboat anchored near the tip of the southern bar.

Island 614-380A

Old Name: (9) NM29

Location

Latitude: 27.2216 **Longitude:** -97.4197 **Area:** N/A **Elevation:** N/A
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: N/A

Substrate types: sand

Summary: This was a narrow strip of sand and shell, but it is now completely submerged.

Bird Survey 1997 - 2001

614-380B	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
GBTE	submerged	submerged	submerged	submerged	submerged
BLSK					

Nesting/Use History

A few pair of skimmers attempted to nest here from 1990 to 1996. Gull-billed terns joined the skimmers in 1993 and 1996. In 1996 the island was finally flooded.

Discussion and Management Recommendations

There are no recommended for this site.

Island 614-380B

Old Name: (10) SB-NM33

Location

Latitude: N/A **Longitude:** N/A **Area:** N/A **Elevation:** 0.9 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: one cabin

Predators: N/A

Substrate types: serpulid and coquina reef limestone rock and cobble, sand and shell

Summary: This is a long strip of serpulid rocks, sand and shell with very little vegetation. A cabin with a damaged roof is located near the center. The vegetation is primarily halophytes with some pigweed. Much of the island is bare.

Bird Survey 1997 - 2001

614-380A	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
TRHE					
SNEG					
GBTE				7	
BLSK			6	55	
LAGU					

Nesting/Use History

Beginning in 1977, gull-billed terns and skimmers attempted to nest here. In subsequent years they were joined by laughing gulls, tri-colored herons and in one year, by snowy egrets. Evidently, some skimmers nested after the 2001 count since an unfledged chick was seen in September. Occupation has been intermittent, depending on tidal conditions and human activity.

Discussion and Management Recommendations

Recommendations:

1. This island presents a good foundation for deposition and for the formation of a larger island.
2. The cabin should be removed.

Island 614-380C**Old Name:** (11) NM27**Location**

Latitude: 27.2243 **Longitude:** -97.4187 **Area:** N/A **Elevation:** 0.9 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** eight cabins**Predators:** fire ants**Substrate types:** serpulid and coquina reef limestone rock, sand and shell

Summary: This is one of the larger islands of this chain and it is well occupied by cabins - each with its own pier and outhouse at the end. Three cabins on the southern end have additional piers extending to the east. The island appears to have been formed by five or six original deposits. The southern and northern area of this site is connected by a narrow section of primarily sand and shell. Vegetation on the southern end is typical of these islands with pigweed, wolfberry, sea-blite, sea purslane, glasswort and saltwort. The higher areas contain sea oxeye and saltgrass. There is a large hole in the northern part of this section. The northern section contains much more sea oxeye and saltgrass. There is a mixture of grasses and false ragweed on the higher elevations. There are bare areas at each end of the island.

Bird Survey 1997 - 2001

614-380C	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
TRHE			3	88	24
SNEG					5
REEG					
CAEG				1	
GBTE		7			
BLSK	45	42	44		
LAGU	105	7	206	210	217

Nesting/Use History

Recordings of nesting tri-colored herons, snowy egrets, skimmers and laughing gulls date to 1984. Laughing gulls have been the most persistent nesting species. Gull-billed terns were present only in 1985, 1986 and 1998. The return in numbers of tri-colored herons in 2000 (88) and in 2001 (24) is noteworthy. The intermittent nesting activity is probably due one or more combined factors including the frequency of cabin use by the lessees, little rainfall, and poor vegetation growth.

Discussion and Management Recommendations

This site is an ideal location for waterbird management. It has the proper vegetation and ideal feeding areas are nearby. Recommendations:

1. Little can be done to manage this island for birds unless the cabins are removed.
2. The cabin users should be educated about the island's nesting history and the value of promoting successful bird nesting, especially the tri-colored herons.

Island 614–380D

Old Name: (12) NM25A

Location

Latitude: N/A

Longitude: N/A

Area: N/A

Elevation: N/A

Length: N/A

Width: N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: N/A

Substrate types: N/A

Summary: Island is no longer present

Island 614-380E

Old Name: (13) NM25

Location

Latitude: 27.2280 **Longitude:** -97.4183 **Area:** N/A **Elevation:** 0.6 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: fire ants

Substrate types: serpulid and coquina reef limestone rock, sand and shell

Summary: This small island has a good foundation that slopes up from the water to a central crown. There is good growth of sea oxeye on the crown mixed with false ragweed and pigweed. Typical halophytes surround the margin.

Bird Survey 1997 - 2001

D614-380E	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
GBHE					
TRHE	1	2	3	14	14
SNEG	12	1		6	2
REEG				4	
ROYT	74		146		
SATE			2		
FOTE					
GBTE					
BLSK		11		18	7
LAGU	42	210	6	14	4

Nesting/Use History

In 1980, tri-colored herons, royal terns, gull-billed terns, skimmers and laughing gulls occupied this island. Snowy egrets began nesting in 1984, and reddish egrets in 1988. Reddish egrets reappeared in 1994 and 1996. Two pair of Forster's terns nested here in 1985, but did not return. Tri-colored herons and snowy egrets have consistently nested in the sea oxeye throughout the years. Sandwich terns joined the royal terns in 1999. Black skimmers and gull-billed terns have used the bare marginal areas during most of the years, skimmers more so than terns. Laughing gulls have nested on this site every year except one since 1980.

Discussion and Management Recommendations

This is an excellent island for birds that nest on higher platforms. Wade fishermen closely approach these islands during the nesting season. Recommendations:

1. If the island is selected for deposition and is enlarged, trees should be planted.
2. Signs should be installed to prohibit human activity during the spring and summer months when wade fishermen tend to closely approach.

Island 614–380F

Old Name: (14) NM23A

Location

Latitude: 27.2291 **Longitude:** -97.4182 **Area:** N/A **Elevation:** 0.6 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: none

Substrate types: serpulid and coquina reef rock and cobble, sand and shell

Summary: This island is smaller than the one previous (614–380E). There is a central core of sea oxeye, false ragweed and pigweed surrounded by halophytes. There are bare margins around the island with extensions to the north and south.

Bird Survey 1997 - 2001

614-380F	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
TRHE		3	1	3	4
SNEG		1		2	1
REEG	1			3	
CAEG					
ROYT		60			
GBTE	10/7P	18/13P		12/8P	6/4P
BLSK	22/11P	40/20P	16/8P	28/14P	80/40P
LAGU	30/21P	50/35P	12/8P	16/11P	7/6P

Nesting/Use History

The records for this island indicate a wide variety of colonial waterbirds using this site since recording began in 1978 with the discovery of gull-billed terns and skimmers. These two bare-ground nesters have continued to use this island through the years, skimmers more often than terns. In 1980, 46 pair of royal terns replaced skimmers, 6 pair did the same in 1990 and 60 pair nested with skimmers in 1998. A few pair of laughing gulls nested in the low vegetation almost every year since 1983. Herons and egrets appeared in 1989 and small numbers have used the island intermittently since.

Discussion and Management Recommendations

This is a good island for enhancement through deposition and containment of good material. The union of this island with either or both of its neighbors would create a single, remote island, large enough to be managed for all bird species in this area. This would alleviate some of the pressure to nest on islands with human activity. The creation of such an island requires a large expenditure of money, material and time. Mitigated material could be barged to the area and off-loaded; the water is deep enough on the western side. Recommendations:

1. Use deposition to create a large island and install containment devices.
2. A person with knowledge of colonial waterbirds should perform management and oversight of the project.

Island 614-380E

Old Name: (14) NM23A

Location

Latitude: N/A **Longitude:** N/A **Area:** N/A **Elevation:** 1.2 m

Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: N/A

Substrate types: serpulid and coquina reef rock and cobble, sand and shell

Summary: This island is even smaller than the previous one (614-380F). The vegetation is similar, but with a little more bare area.

Bird Survey 1997 - 2001

SB-N25	5/22/96	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
GBHE						
TRHE	6	1	2	3	14	14
SNEG		12	1		6	2
REEG					4	
ROYT		74		146		
SATE				2		
FOTE						
GBTE	4					
BLSK	212		11		18	7
LAGU	24	42	210	8	14	4

Nesting/Use History

Recorded observations since 1980 indicate that this small island has been used by a wide variety of colonial waterbirds.

Discussion and Management

N/A

Island 614-380G**Old Name:** (15) NM23**Location**

Latitude: 27.2309 **Longitude:** -97.4172 **Area:** N/A **Elevation:** 0.6 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** cabin remnants**Predators:** fire ants**Substrate types:** serpulid and coquina reef rock and cobble, sand and shell

Summary: This is another low island with a central vegetated region surrounded by bare sand and shell. There is a long, bare extension to the south that emerges during low tide. The remains of a cabin are scattered among the vegetation on the crown. Vegetation consists of sea oxeye, pigweed, evening primrose and halophytes.

Bird Survey 1997 - 2001

614-380G	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
GBHE					
TRHE		1		5	
SNEG		1			
REEG					
ROYT					
SATE					
CATE					
GBTE	15	4			
BLSK	37	12	7		3
LAGU	8	20	10	14	1

Nesting/Use History

Recorded observations since 1977 indicate bird diversity is declining. In the early years ground-nesters were prevalent, especially royal terns. However, the terns have not been observed nesting since 1980. Tri-colored herons were also present in 1977, along with snowy egrets, which used the island intermittently until 1994. Only the five individual tri-colored herons have appeared since that year. One reddish egret was observed in 1987 and there were three seen in 1991. A few pair of laughing gulls appeared in most years.

Discussion and Management Recommendations

Evidently, the cabin was destroyed by the last hurricane and Texas General Land Office did not allow reconstruction. With the removal of the cabin debris, this would be a good island for birds. The proper vegetation is present for all but the tree-nesters. A larger island could be created here if several adjacent islands were joined with additional material.

Recommendations:

1. Remove cabin debris.
2. Plant proper native trees where the cabin was located.
3. Place additional deposition material to enlarge and enhance the island.
4. Install signs to prohibit human activity during the nesting season.

Island 614-380H**Old Name:** (16) NM21A**Location**

Latitude: 27.2325 **Longitude:** -97.4167 **Area:** N/A **Elevation:** 0.3 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** N/A**Predators:** none**Substrate types:** serpulid and coquina reef rock and cobble, sand and shell

Summary: This low stretch of dredged material is all that remains of the original deposit. Most of the island is submerged during high tides. There is a small amount of low, halophytic vegetation on the higher part.

Bird Survey 1997 - 2001

610-380H	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
SATE					
GBTE					
BLSK	20/10P	20/10P			4/2P
LAGU					

Nesting/Use History

Gull-billed terns and skimmers were first recorded here in 1984 and have often attempted to nest in favorable weather conditions. The skimmers were more persistent than the terns. Two other species made one-time appearances on the island, 6 pair of Sandwich terns in 1986 and 18 pair of laughing gulls in 1987.

Discussion and Management Recommendations

The foundation is good. Recommendations:

1. Deposition of good dredge material is desirable.

Island 614–380I

Old Name: (17) NM21

Location

Latitude: 27.2353 **Longitude:** -97.4162 **Area:** N/A **Elevation:** 0.9 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: none

Substrate types: serpulid and coquina reef rock and cobble, sand and shell

Summary: This is a small, east-west orientated island. There is a deep pit on the southwestern corner, and on the northern side is a higher shelf that ends in a point on the eastern side. The shelf is loose sand and shell with scattered halophytic vegetation. There is some sea oxeye on the shelf with more on the eastern point. The island is nearly covered with halophytes. A small, exposed sandy island to the north is considered as part of this site and contains a small amount of halophytic vegetation on its higher points.

Bird Survey 1997 - 2001

614-380I	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
GBHE					
TRHE		5	9		30
SNEG		10			3
REEG		15	8		
CAEG					
ROYT	300	230			
SATE	2				
FOTE					
GBTE	3	21		1	
BLSK	95	33	22	57	6
LAGU	7	26	27	2	21

Nesting/Use History

A wide diversity of birds have nested here throughout the surveyed years. The first recorded birds were skimmers in 1977. At times, the number of birds seemed to exceed the carrying capacity. In 1984, 550 pair of Sandwich terns and 460 pair of royal terns were estimated on the sand and shell shelf. Some species have attempted to nest here in almost every year. Although the vegetation is not their preferred type, herons and egrets have nested on the ground and in the sea oxeye. They first appeared in 1984 and increased in abundance when

the terns were not present. Tri-colored herons were more common, but in some years snowy and reddish egrets were found in greater abundance. Great blue herons constructed ground nests of sticks here in 1989, 1994 and 1995.

Discussion and Management Recommendations

This is an ideal island for colonial waterbirds because of its isolation. The foundation is good for the construction of a larger island with trees, bushes, herbs and bare ground suitable for all types of nesters. Recommendations:

1. As the island stands today, it should be managed for terns and skimmers by removing some vegetation from the shelf and thereby expose more bare ground. This might also deter laughing gulls from increasing their occupation.
2. Deposition to enlarge the island would be desirable.
3. Following deposition, manage for all types of nesters by establishing trees, bushes, and bare ground areas.

Island 614-380J

Old Name: (18) NM19A

Location

Latitude: 27.2367 **Longitude:** -97.4161 **Area:** N/A **Elevation:** 0.3 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: none

Substrate types: serpulid and coquina reef rock and cobble, sand and shell

Summary: This is the southern most of two islands that are joined together during very low tide by a narrow strip of substrate. It is very small with a central core of halophytic vegetation. Most of the area is bare sand.

Bird Survey 1997 - 2001

614-380J	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
GBHE					
CATE					
GBTE				25	
BLSK				25	4

Nesting/Use History

Beginning in 1977, Caspian terns, gull-billed terns and black skimmers have attempted to nest at this site. The latter have been the most persistent.

Discussion and Management Recommendations

The island is slowly eroding away and deposition would provide opportunities for waterbird habitat enhancements. Additional material could be used to join this island with the adjacent island forming a larger, long island with higher elevation. This would encourage the establishment of taller, sturdier vegetation favored by herons and egrets. Recommendations:

1. Depositing new material would be desirable and containment devices should be installed.

Island 614-380K**Old Name:** (19) NM19**Location**

Latitude: 27.2379 **Longitude:** -97.4159 **Area:** N/A **Elevation:** 0.45 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** N/A**Predators:** none**Substrate types:** serpulid and coquina reef rock and cobble, sand and shell

Summary: This is the northern most island of two that are joined at very low tide. It is slightly larger and higher than its neighbor (614-380J). In addition to the halophytes, there is some sea oxeye and grasses on this site. There is a bare projection to the east and to the south.

Bird Survey 1997 - 2001

614-380K	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
CATE					
ROYT					
FOTE					
GBTE					6/4P
BLSK		100/50P			30/15P

Nesting/Use History

The nesting history is similar to its neighbor 614-380J. First recorded observations were of Caspian terns, gull-billed terns and skimmers in 1977. One pair of Caspian terns tried nesting in 1989. Gull-billed terns and skimmers have nested intermittently since then with the gull-bills missing more years than the skimmers. A single nest of royal terns was found in 1985.

Discussion and Management Recommendations

Deposition at the junction of the two islands could form a long island on which trees and shrubs could be planted. During early formation, limited vegetation would attract terns and skimmers. Later herons and egrets would be attracted to the vegetation for nesting.

Recommendations:

1. Deposition at this site is desirable and containment devices should be provided to stop erosion.
2. Establish trees and shrubs.

Island 614-362A

Old Name: (20) NM17A

Location

Latitude: 27.2470 **Longitude:** -97.4140 **Area:** N/A **Elevation:** 0.6 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: one cabin and pier

Predators: fire ants

Substrate types: serpulid and coquina reef rock and cobble, sand and shell

Summary: This small, round island lies within 6 meters of a small cabin on pilings. There is a short pier extending to the west. The upper part of the island contains a good stand of sea oxeye and some patches of sea grass and pigweed. The margins are covered with typical halophytes. There is a small extension of bare sand and shell on the southeastern end. A permanent duck-hunting seat is found at the center of the eastern side.

Bird Survey 1997 - 2001

614-362A	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
GBHE					
TRHE		10	8		10
SNEG	1	24			2
REEG	4	5	1	2	1
CAEG		8			
GBTE					6
BLSK					
LAGU	28	14	22	6	4

Nesting/Use History

In spite of the cabin's close proximity, this has been a good island for colonial waterbirds, especially for low-vegetation nesters. Tri-colored herons, snowy egrets and reddish egrets have nested here in almost every year since 1983. Gull-billed terns and skimmers have used the bare sand and shell on the southeastern end in certain years, more so in the early years of observations. Laughing gulls have been absent for only three years since 1980. When the cabin was occupied, the bird census was not taken.

Discussion and Management Recommendations

Very little can be done to manage this island while the cabin is present. Recommendations:

1. If the cabin is removed, there is a good foundation for the construction of a larger island.

Island 614-362B

Old Name: (21) NM17-OM135 Rabbit Island

Location

Latitude: 27.2433 **Longitude:** -97.4147 **Area:** N/A **Elevation:** 0.9 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: fire ants

Substrate types: serpulid and coquina reef rock and cobble, sand and shell

Summary: This long, low island is near the mouth of Baffin Bay and is much broader and slightly higher along the north than the south. There are halophytes at the margins, grading into wolfberry, pigweed, saltgrass and sea oxeye at the crown. This type of cover is distributed throughout the length of the island. Bare areas in the vegetation are near the southern and northern ends. The southern tip is bare sand and shell and is being extended by the accretion of sand and silt. The entire eastern margin is also bare and the water here is very shallow because of the accumulation of sand and silt from Padre Island.

Bird Survey 1997 - 2001

614-362B	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
GBHE	6	8	4	20	20
LBHE					
TRHE	4	72	46	12	32
GREG	10	18	19	2	5N
SNEG	30	74	65	24	20
REEG	28	60	80	108	17
CAEG		4	3		3
WFIB					
ROSP	1	68L			70L
CATE	120	84	86	90	12
ROYT	58	260	280	420	1080
SATE				10	120
FOTE					
GBTE	35	32	4	45	35
BLSK	75	48	15	11	22
LAGU	21	35	12	238	105

Nesting/Use History

At one time a commercial fisherman inhabited a small shack located near the southern end of the island. He introduced domestic hares to supplement his diet and they proliferated, eventually consuming all the vegetation on the island. Two hundred hares were counted in 1977, along with skimmers and gulls that were attempting to nest. By 1979, all the vegetation was gone and only four hares remained. One hare was present in 1980, and none in 1981. In 1980, 14 tri-colored herons tried to nest in the low sea oxeye and 71 dead gulls were recorded. Since 1983, there has been a steady increase in the number and species of birds nesting and the island is now overcrowded. The increase is due to the immigration of birds from other nearby islands. Skimmers, gull-billed and Forster's terns nest on the southern tip of the island, royal terns use the south central part, and Caspian terns use the northern bare ground areas. Herons and egrets use the ground and sea oxeye on the higher elevations throughout the length of the island. Laughing gulls are found anywhere there is vegetation. In 2001, there was a reduction in the number of heron and egret pairs, but an increase of terns. This could be due to the lack of rain and poor vegetation growth.

Discussion and Management Recommendations

This is probably the most important colonial waterbird island in this section of the Laguna Madre and it should be monitored closely. Based on the number of empty shotgun shells, the island is often used by duck hunters in the winter. Recommendations:

1. Native trees and bushes should be established to increase the number of larger nesting birds.
2. Deposition of good material to enlarge the island might alleviate some overcrowding. This should be placed over the silt on the eastern side.
3. Signs should be installed prohibiting human activity from the island all year.

Island 614–362C

Old Name: (22) NM15A–OM133A

Location

Latitude: 27.2504 **Longitude:** -97.4084 **Area:** N/A **Elevation:** 0.0 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: coyotes and raccoons

Substrate types: sand, silt and shell

Summary: This was one of four dredge islands made along a small channel near Padre Island and it lies northeast of the previous island (614–362B). It was round, very low and vegetated with halophytes. The remnants are now completely submerged due to erosion.

Bird Survey 1997 - 2001

614-362C	1997	1998	5/19/99	2000	2001
GBHE	not surveyed	not surveyed	submerged	not surveyed	not surveyed
ROYT					
SATE					
GBTE					
LETE					
BLSK					
LAGU					

Nesting/Use History

Beginning in 1976, a variety of birds attempted to nest here. Great blue herons were the first to use the island and later terns and skimmers used the bare ground as the island was further inundated. In 1994, 150 terns nested here, but by 1996 the island was completely submerged.

Discussion and Management Recommendations

Nothing should be done with the islands that were once here. The channel is silted in and the entire area is so shallow that the islands are isolated, except from predators. The lack of water depth prevented surveys of these islands during years of low tides.

Island 614-362D**Old Name:** (23) NM15B-OM133B**Location**

Latitude: 27.2514 **Longitude:** -97.4055 **Area:** N/A **Elevation:** 0.3 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** N/A**Predators:** coyotes and raccoons**Substrate types:** sand, silt and shell

Summary: This is the only island of in this four-island chain that remains emergent. It is round island with primarily halophytic vegetation.

Bird Survey 1997 - 2001

614-362D	1997	1998	5/19/99	2000	2001
GBHE	not surveyed	not surveyed	15/7N	not surveyed	not surveyed
TRHE					
GREG					
REEG					
CATE					
GBTE			52/36P		
BLSK			2/1P		
LAGU			26/13P		

Nesting/Use History

The occupancy of this island began in 1976 with the presence of 14 great blue herons. Tri-colored herons, reddish egrets, gull-billed terns and laughing gulls were present the next year. Caspian terns arrived in 1994 and skimmers in 1999. In recent years it has been a good island for loafing herons and egrets during the day. The island was not surveyed during many years because of low tides.

Discussion and Management Recommendations

There are no management actions or recommendations other than to this island erode away. This site should be eliminated from the counts. Raccoon tracks were found in 1987. Any nesting here will not be successful because predator access is too easy across the shallow water.

Island 614-362E

Old Name: (24) NM15C-OM133C

Location

Latitude: 27.2511 **Longitude:** -97.4032 **Area:** N/A **Elevation:** 0.0 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: raccoons, coyotes and many fire ants

Substrate types: sand shell and silt

Summary: This round island has eroded and now is completely submerged. The vegetation in 1976 was halophytic.

Bird Survey 1997 - 2001

614-362E	1997	1998	5/19/99	2000	2001
<u>GBHE</u>	<u>not surveyed</u>	<u>not surveyed</u>	<u>submerged</u>	<u>not surveyed</u>	<u>not surveyed</u>
REEG					
GBTE					
BLSK					

Nesting/Use History

The first observed nesting birds were great blue herons in 1976. Reddish egrets, gull-billed terns and skimmers nested in 1977. In 1978 many dead birds were found - possibly victims of the numerous fire ants present that year. The island is completely submerged today.

Discussion and Management Recommendations

No actions are recommended for this site.

Island 614-361A**Old Name:** (25) NM221-OM117**Location**

Latitude: 27.2859 **Longitude:** -97.4056 **Area:** N/A **Elevation:** 1.2 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** two cabins**Predators:** fire ants**Substrate types:** serpulid and coquina reef rock and cobble, sand and shell

Summary: This is the southernmost island of seven at the mouth of Baffin Bay and lies just east of the GIWW. This island is isolated and the predators that plague the other islands in the chain are not found here. The island is shaped like a fish, with the tail at the southern end and the body at the northern end. The tail contains pigweed, wolfberry, sea purslane and bare sand and shell. The main body of the island contains dense clusters of sea oxeye, saltgrass, wolfberry, unknown grasses, prickly pear, sandbur and false ragweed. The northernmost cabin is in disrepair. The southern cabin appears to be used less frequently than other cabins in this chain.

Bird Survey 1997 - 2001

614-361A	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
GBHE					
TRHE	35				102
GREG					
SNEG	25				40
REEG	14				11
CAEG	1				
FOTE					
GBTE		34			21
LETE					
BLSK	95	75	49	25	90
LAGU	77	8	14	49	49

Nesting/Use History

During certain years, this island has hosted a great variety of colonial waterbirds, evidently dependent on the level of human activity associated with the cabins. Each year since 1973, the southern end has been occupied by skimmers and gulls, and intermittently by gull-billed terns. Nesting herons and egrets used the sea oxeye, wolfberry and a single salt cedar during

the period 1994 to 97 and 2001. Their appearance is dependent on the cabin occupants and overcrowding of Rabbit Island.

Discussion and Management Recommendations

This is an excellent island for all types of colonial waterbirds: it is isolated and not subject to predators, it contains the proper vegetation and bare areas for nesting, it is near other isolated islands that are heavily used, and the substrate quality is sufficient to maintain the integrity of the island. The only problem is the presence of cabins and the disturbance caused by the occupants. One year, two boys were observed tromping on nests and throwing eggs.

Recommendations:

1. If the cabins remain, the occupants should be educated about their impacts on nesting birds.
2. Enhancements for nesting success should include adding trees on the eastern crown and clearing vegetation on the southern extension.

Island 614-361B**Old Name:** (26) NM219-OM113**Location**

Latitude: 27.2910 **Longitude:** -97.4050 **Area:** N/A **Elevation:** 2.8 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** six cabins**Predators:** raccoons and fire ants**Substrate types:** serpulid and coquina reef rock and cobble, sand and shell

Summary: This is the southern most of six islands that are more or less united into a single unit through the deposition of dredged material between them. All six islands were originally round when first formed, and because of their foundation have eroded very little. Vegetation on the eastern side includes several mesquite trees, surrounded by prickly pear. Near the center are some very large Australian pines and three palm trees. The rest of the vegetation is herbaceous and good for nesting colonial waterbirds.

Bird Survey 1997 - 2001

614-361B	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
GBH					
TRHE					
SNEG					
REEG					
GBTE					
LETE					
BLSK					
LAGU					

Nesting/Use History

All six islands have a similar interesting and unusual history. In 1979 or 1980, the occupant of the most northern island introduced domestic hares as a food supplement. By 1982, hundreds were present and they had begun to devastate the vegetation. As a result, birds that nested here moved to the next adjacent island south. The hares subsequently followed the birds to the next island whereby the same cycle was repeated. By 1985, the hares were numerous on the four northernmost islands in the chain. Raccoons then appeared and the population of hares declined. In 1986, a government trapper eliminated the remaining hares, but not the raccoons.

Records for this island date from 1972 when a few herons and egrets and a higher number of terns, skimmers and gulls were recorded. The only other count of herons and egrets was in 1984 when 227 tri-colored herons, snowy egrets and reddish egrets were found. Evidently, the hares and raccoons on the other islands forced them there. Despite the presence of a raccoon, 390 pair of laughing gulls attempted to nest that same year. In May 1995, 391 laughing gulls, 4 tri-colored herons and 2 black skimmers were counted. One week later, all the birds were absent and only raccoon tracks were observed. No birds have used this island for nesting since 1995.

Discussion and Management Recommendations

Recommendations:

1. Unless the cabins and raccoons are removed, there is little need to consider this island for management.

Island 614-361C**Old Name:** (27) NM217-OM111**Location**

Latitude: 27.5958 **Longitude:** -97.4040 **Area:** N/A **Elevation:** 2.8 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** three cabins**Predators:** raccoons and fire ants**Substrate types:** serpulid and coquina reef rock and cobble, sand and shell

Summary: This island is the next in the group and is joined to its northern neighbor. There are scattered mesquite trees on the eastern side and a wide band of sea oxeye around the margins inland to the halophytes. Bare sand and shell are present at the northern and southern ends. Two cabins are located near the western shore and another larger one is on the crown. The occupants closely mow the vegetation around each cabin.

Bird Survey 1997 - 2001

614-361C	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
GBHE					
TRHE					
SNEG					
REEG					
WFIB					
CATE					
ROYT					
LETE					
GBTE					
BLSK					
LAGU					

Nesting/Use History

The history of this island is similar to that of 614-361B above. Low shrub- and ground-nesters used this island from 1972 to 1986, as did bare-ground nesters, gull-billed terns and skimmers. Royal and least terns were present only in 1973. Laughing gulls nested here every year until 1986. Bird use increased in 1982 and 1984 because of the problems on the northern islands in the chain. The island was not surveyed in 1983. Birds did not attempted to nest on the island after 1985 because of raccoons.

Discussion and Management Recommendations

There is no need to develop a management plan until the raccoons are removed. If the raccoons are removed, birds may be lured to return in spite of the cabins. Recommendations:

1. Educate the cabin users.
2. Deposition of material between the islands may attract bare-ground nesters.

Island 614-361D**Old Name:** (28) NM215-OM109**Location**

Latitude: 27.2988 **Longitude:** -97.4036 **Area:** N/A **Elevation:** 1.8 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** four cabins**Predators:** raccoons and fire ants**Substrate types:** serpulid and coquina reef rock and cobble, sand and shell

Summary: This island is tear-shaped. The four cabins are very small and constructed of cemented serpulid rocks and are located near the center of the western margin. Immediately behind them is a large clump of mesquite surrounded by a stand of guinea grass. The mesquite has been here since the surveys began, while those on the other islands in the chain are relatively new. A large oleander sits just south and east of the cabins. Dense stands of sea oxeeye are found on the northern end of the island. The rest of the vegetation is similar to the others in this chain.

For historical information on this and/or the three more northern islands in this chain see: Barnes (1971), McMurry (1971), Simersky (1971), DePue (1974), Chaney, et al (1978).

Bird Survey 1997 - 2001

614-361D	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
GBHE					
TRHE					
BCNH					
GREG					
SNEG					
REEG					
CAEG					
WFIB					
GBTE					
SOTE					
BLSK					
LAGU					

Nesting/Use History

Prior to the arrival of raccoons, this had been the most important bird-nesting island in the chain and in the upper Laguna Madre. Incomplete records date to 1970, when 148 laughing

gulls, 12 skimmers and 8 great blue herons nested here. Later, large numbers of herons and egrets settled onto the island. For example, the records for 1974 indicate the following estimated nesting bird count: 715 tri-colored herons, 268 cattle egrets, 214 snowy egrets, 199 black skimmers, 183 gull-billed terns, 148 great blue herons, 110 reddish egrets, 6 white-faced ibis, 2 great egrets and one sooty tern.

The presence of hares on the more northern islands increased bird usage of the mesquite stand here. For example, in 1982, 550 cattle egrets and 500 snowy egrets were observed. By the next year, hares had immigrated to this island and the bird population began to decline. When the raccoons finally arrived in 1985, the birds departed and none have nested here since. The mesquite trees are still used as resting areas by great blue herons and black-crowned night-herons.

Discussion and Management Recommendations

Historical observations indicate that birds use the island even while the cabins were occupied. This is attributable to cabin user education about nesting bird sensitivity to human activity and their value to the ecosystem. Recommendations:

1. This island could possibly be repopulated if the raccoons and the guinea grass were removed.
2. Ideally the cabins should be abandoned or removed.
3. If these enhancements are implemented, it will be necessary to use decoys to attract birds back to the island.

Island 614-361E**Old Name:** (29) NM213-OM107**Location**

Latitude: 27.3033 **Longitude:** -97.4026 **Area:** N/A **Elevation:** 2.8 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** one cabin**Predators:** raccoons and fire ants**Substrate types:** serpulid and coquina reef rocks and cobble, sand and shell

Summary: The original round shape of this island has been elongated by the deposition of dredge material at each end. There are several mesquite trees on the eastern side, near the island's central crown. Other than the palm tree near the cabin, the vegetation is similar to that of the other islands to which it is connected.

Bird Survey 1997 – 2001

614-361E	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
GBHE					
BCNH					
TRHE					
SNEG					
REEG					
WFIB					
GBTE					
LETE					
BLSK					
LAGU					

Nesting/Use History

The earliest reliable count for this island was made in 1972. All species in the chart above nested here at one time, except the black-crowned night-herons, white-faced ibis and least terns. The black-crowned night-herons and white-faced ibis appeared in once nested here in 1977 and least terns nested in 1985. In 1985, domestic rabbits were introduced to the island, and appear to have affected the nesting birds on this island earlier than the others in the chain. Herons and egrets began to decline with the appearance of the hares in 1981. All birds left the island in 1984 and never returned. The only exception was a pair of least terns that attempted to nest in 1985.

Discussion and Management Recommendations

This island has ideal vegetation for nesting birds and could be good site for enhancement. The single cabin located near the western margin would not pose a problem.

Recommendations:

1. No management actions are recommended until the raccoons are removed.

Island 614-361F

Old Name: (30) NM211-OM105

Location

Latitude: 27.3066 **Longitude:** -97.4014 **Area:** N/A **Elevation:** 2.7 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: one cabin

Predators: raccoons and fire ants

Substrate types: serpulid and coquina reef rock and cobble, sand and shell

Summary: This is a tear-shaped island with the high point located at the north central end. A single cabin is located near the central part of the western shore. The northern part contains some bare areas resulting from the recent deposition of dredge material. There are patches of young mesquite trees near the crown. The rest of the vegetation is similar to that of the other islands in this group.

Bird Survey 1997 - 2001

614-361F	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
GBHE					
TRHE					
BCNH					
SNEG					
REEG					
WFIB					
GBTE					
SOTE					
BLSK					
LAGU					

Nesting/Use History

This island and the nesting birds here were one of the first to be studied in the United States (Barnes (1971), McMurry (1971) and Simersky (1971)). In 1970, the nests of 274 laughing gulls, 145 tri-colored herons, 89 snowy egrets, 33 reddish egrets, 17 gull-billed terns, 17 black skimmers, 13 great blue herons and one sooty tern were counted. Black-crowned night-herons and white-faced ibis appeared later. These birds continued to nest here in good numbers until the hares immigrated to this island. By 1983, the hare population had increased and the vegetation had been decimated, forcing the birds to leave. The arrival of raccoons in 1985 and their continued presence has prevented the birds from returning.

Discussion and Management Recommendations

Recommendations:

1. The removal of raccoons must take place before permanent management recommendations can be made.

Island 614-361G**Old Name:** (31) NM209-OM103**Location**

Latitude: 27.3098 **Longitude:** -97.4009 **Area:** N/A **Elevation:** 3.6 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** three cabins**Predators:** raccoons and fire ants**Substrate types:** serpulid and coquina reef rock and cobble, sand and shell

Summary: This is the last island in the chain and it retains much of its original shape and is slightly higher than its neighbors. Near the summit are some young mesquite trees and a single large oleander. The crown is bare and there is bare sand and shell at the southern end of the island. The rest of the island is covered with plants conducive to nesting by shrub- and ground-nesters. There are good stands of sea oxeye, cordgrass, camphor daisy, wolfberry, wild indigo and prickly pear. Two of the three cabins are on pilings in the water at the northern end. A house that used to be located near the central margin is gone and in its place is a new, two-story hotel. Century plants and Spanish daggers are found around the largest cabin.

Bird Survey 1997 - 2001

614-361G	5/22/97	5/21/98	5/19/99	5/25/00	6/1/01
GBHE					
TRHE					
SNEG					
REEG					
WFIB					
GBTE					
LETE					
SOTE					
BLSK					
LAGU					

Nesting/Use History

In 1970, the following nesting birds were recorded: 274 laughing gulls 39 snowy egrets, 34 black skimmers, 24 gull-billed terns, 24 tri-colored herons, 23 great blue herons, 11 reddish egrets and one sooty tern. Least terns and white-faced ibis did not appear until 1976. All continued to nest here in good numbers until the domestic hares were released in 1980. The

only birds attempting to nest after 1980 were laughing gulls in 1983 and 1984. Following the introduction of raccoons in 1985, no further nesting was attempted by any species.

Discussion and Management Recommendations

The island, like all this islands in this chain, is a good one for colonial waterbirds, with the exception of the raccoons. Recommendations:

1. The removal of raccoons must precede the development of any long-term management plan.

Island 614-364A**Old Name:** (32) NM199A**Location****Latitude:** 27.327 **Longitude:** -97.3922 **Area:** N/A **Elevation:** 0.9 m**Length:** N/A **Width:** N/A**Description****Ownership:** Texas General Land Office**Impacts:** N/A**Predators:** coyotes and fire ants**Substrate types:** sand, silt and shell

Summary: This island is part of a four-island chain resulting from the construction of a side channel extending from the GIWW toward Padre Island. Two of the islands have since joined due to accretion. The resulting three islands are all low and round with similar vegetation including sea oxeye, which covers much of the ground. False ragweed and *Croton* are also present. Halophytes are not abundant and are replaced by shoregrass. Large areas of hard sand and silt surround each of the three islands.

Bird Survey 1997 - 2001

614-364A	1997	5/21/98	5/19/99	2000	6/1/01
GBTE	not surveyed	8	1	not surveyed	
BLSK		8	23		
LETE		4			

Nesting/Use History

These islands have not been surveyed every year because of the difficulty in traversing the silted channel. During the past five years, they were surveyed only in 1998 and 1999. The earliest records are from 1973, when four pair of gull-billed terns and one pair of least terns were observed. Other birds attempting to nest here were probably unsuccessful as coyotes from Padre Island often visit these islands. However, for a variety of colonial waterbirds they are good islands for loafing and feeding during the day.

Discussion and Management Recommendations

If the coyotes and other predators were controlled, this group could be developed into good nesting islands. Recommendations:

1. Predator control requires constant monitoring or some type of barrier between Padre Island and this site.

Colonial Waterbird and Rookery Island Management Plan

2. Additional dredge material to increase the island's elevation would be desirable.
3. Planting trees would be an improvement.

Island 614-364B**Old Name:** (33) NM199B**Location****Latitude:** 27.3257 **Longitude:** -97.3905 **Area:** N/A **Elevation:** 0.9 m**Length:** N/A **Width:** N/A**Description****Ownership:** Texas General Land Office**Impacts:** N/A**Predators:** coyotes and fire ants**Substrate types:** sand, silt and shell**Summary:** This site was formed by the union of two islands in center of the four-island group. Vegetation is dominated by halophytes.**Bird Survey 1997 - 2001**

614-364B	1997	5/21/98	5/19/99	2000	6/1/01
GBTE	not surveyed			not surveyed	
LETE					
BLSK					

Nesting/Use History

Since 1973, the same three species (see table above) have attempted to nest here intermittently on the bare ground. Their last attempt was in 1994.

Discussion and Management Recommendations

Management actions for these islands are not recommended because predator access from Padre Island is too easy. If the coyotes and other predators were controlled, this group could be developed into good nesting islands. Recommendations:

1. Predator control requires constant monitoring or some type of barrier between Padre Island and this site.
2. Additional dredge material to increase the island's elevation would be desirable.
3. Planting new trees would be an improvement.

Island 614-364C

Old Name: (34) NM199C

Location

Latitude: 27.3243 **Longitude:** -97.3884 **Area:** N/A **Elevation:** 0.9 m

Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: coyotes and fire ants

Substrate types: sand, silt and shell

Summary: This island is the closest to Padre Island and is similar in all respects to the other two islands in the chain.

Bird Survey 1997 - 2001

614-364C	1997	5/21/98	5/19/99	2000	6/1/01
GBTE	not surveyed		28/20P	not surveyed	
BLSK			8/4P		

Nesting/Use History

Nineteen gull-billed tern nests were counted on this island in 1979. The next time the island was surveyed was in 1999.

Discussion and Management Recommendations

Recommendations are the same as the other islands in the group, i.e. management actions for this island are not recommended because predator access from Padre Island is too easy. If the coyotes and other predators were controlled, this group could be developed into good nesting islands. Recommendations:

1. Predator control requires constant monitoring or some type of barrier between Padre Island and this site.
2. Additional dredge material to increase the island's elevation would be desirable.
3. Planting trees would be an improvement.

Island 614-360

Old Name: (35) NM187-OM91

Location

Latitude: 27.2482 **Longitude:** -97.3839 **Area:** N/A **Elevation:** 0.9 m

Length: N/A **Width:** N/A

Description

Ownership: Padre Island National Seashore (PAIS)

Impacts: N/A

Predators: fire ants

Substrate types: serpulid and coquina reef rock and cobble, sand and shell

Summary: This long, narrow island is the southernmost nesting island protected by PAIS. There are several small rises formed of coquina reef rocks. The higher parts of the island contain some sea oxeye, pigweed, wolfberry and a single patch of prickly pear. The remainder of the island is covered with halophytes, primarily sea purslane. There is a shallow sand and silt rim that forms approximately 10 meters from the northern and eastern edge of the island. Presently, the island margins and surrounding waters contain a large amount of soft sand and silt making it almost impossible to approach.

Bird Survey 1997 - 2001

614-360	5/21/97	5/19/98	5/20/99	5/15/00	5/29/01
GBHE	10	14	4	6	4
LBHE					
TRHE		2	16	2	9
GREG					
SNEG		10	12	8	2
REEG		7	22	14	5
CAEG					
ROSP					2N
CATE	80	75	86	26	4
ROYT	4				60
FOTE				4	2
GBTE	97	19	6		7
BLSK	50	50		25	42
LAGU	17	49	84	28	210

Nesting/Use History

Individual records for this island date to 1981 when 50 pair of skimmers and 17 gull-billed tern nests were counted. The following year, ten pair of Forster's terns joined the skimmers

and gull-billed terns in the sea purslane at the southern end of the island. Also in 1982, 14 pair of tri-colored herons and one pair of reddish egrets used the sea oxeye for nesting platforms. Heron and egret species and abundance began to increase in 1985 and remained through 1989. Between 1989 and 1998, the abundance and species of birds observed were variable, but between 1998 and 2001 they returned in their former levels. Between 1995 and 2001, Caspian terns used the island in good numbers (102 in 1995). The use of low vegetation by the tree-nesters (great blue herons, great egrets and spoon-bills) is unusual.

Discussion and Management Recommendations

The island's value is clear from the number and species of nesting birds that either use, or have used this area. It is isolated, predator-free, and has the right type of vegetation.

Recommendations:

1. The site could be improved with the deposition of good material to enlarge the island. Containment devices should be installed.
2. Trees for tree-nesters should be planted following deposition.

Island 614-363**Old Name:** (36) NM178-OM86 Diked**Location**

Latitude: 27.3684 **Longitude:** -97.3825 **Area:** N/A **Elevation:** 3.6 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** two cabins**Predators:** fire ants**Substrate types:** sand and shell

Summary: This large, diked island lies just west of the GIWW, near marker 178. Two houses on the northeastern margin are well constructed and used often. The interior of the dike contains bare areas that are being covered with grasses, false willow, camphorweed and several mesquite trees. The slopes of the dike contain cordgrass and other grasses grading into halophytes at the water's edge. A long sandbar is being formed at the southeastern end of the island.

Bird Survey 1997 - 2001

614-363	5/21/97	5/19/98	5/20/99	5/15/00	6/1/01
GBHE					2N
BCNH					
LBHE					
TRHE					
REEG					
FOTE					
GBTE					
LETE					
BLSK					
LAGU					

Nesting/Use History

Observations of the island date to 1981 when several pair of gull-billed terns, least terns and skimmers nested on the bare interior of the island. Forster's terns joined them in 1984 and by laughing gulls in 1985 and 1986. Great blue herons nested in the mesquite in 2001 only. Other herons and egret tried to nest here only in 1989.

Discussion and Management Recommendations

The presence of the cabins and the packing of the interior have deterred birds from reusing this island. There is little value in trying to manage this island in its present condition.

Recommendations:

1. Deposition of material into the diked area and elevating the southern sand bar might bring back ground-nesters.

Island 614-347

Old Name: (37) NM169-OM85

Location

Latitude: 27.3786 **Longitude:** -97.3706 **Area:** N/A **Elevation:** 0.6 m

Length: N/A **Width:** N/A

Description

Ownership: Padre Island National Seashore

Impacts: N/A

Predators: none

Substrate types: sand and shell

Summary: This very small, low island is located on the eastern side of the GIWW, near marker 169. A central area of halophytic vegetation is surrounded by bare sand.

Bird Survey 1997 - 2001

614-347	5/23/97	5/19/98	5/20/99	5/15/00	5/29/01
GBHE					
LBHE					
TRHE					
SNEG					
REEG					
CATE					
FOTE		20	6		48
GBTE	4	42	24	2	41
BLSK	2	9	4	1	14

Nesting/Use History

This has been a perfect area for the bare-ground nesters since 1983. Herons and egrets have attempted to nest intermittently, but not since 1995. The island is eroding because of heavy wave action from prevailing southeast winds and the absence good foundation material.

Discussion and Management Recommendations

This could be a very good island with the deposition of serpulid and coquina reef rocks, sand and shell. The island's isolation is ideal for colonial waterbirds. Recommendations:

1. Install signs prohibiting human activity during nesting season.

Island 614-345

Old Name: (38) NM163-OM81

Description

Latitude: 27.3919 **Longitude:** N-97.3561 **Area:** N/A **Elevation:** 1.2 m
Length: N/A **Width:** N/A

Location

Ownership: Padre Island National Seashore

Impacts: N/A

Predators: fire ants

Substrate types: serpulid and coquina reef rocks, sand, shell and silt.

Summary: A high ridge encircles the northern end of the island slopes gently to the southern end and more sharply to the northern end. The central portion of the southern bare area often contains water and blue green algae. The margins of the island contain typical halophytes which grade into wolfberry and a narrow band of sea oxeye that is more prominent on the northern end. There is a large patch of sunflower on the western side of the summit. The summit is covered with an unknown plant and a patch of cowpen daisy. There is buffle grass and seven clumps of salt cedar, each with nesting platforms. There are four small mesquite, two granjeno, several new salt cedars trees and two small rattlepods on the western slope of the island. The slope contains pigweed, cowpen daisy and Texas bermuda. Approximately 50 percent of the island is vegetated.

For information on the construction, spoil deposition and nesting see Chaney et al (1978).

Bird Survey 1997 - 2001

614-345	5/21/97	5/19/98	5/20/99	5/15/00	5/29/01
AWPE	390	470	380	470	450
GBHE	4	15	4	6	10
LBHE					
BCNH		1			
TRHE	1	3			
GREG	2	1			
SNEG					
REEG				1	
CAEG					
WFIB					
ROSP					
CATE				1	
ROYT					
SATE					

614-345	5/21/97	5/19/98	5/20/99	5/15/00	5/29/01
COTE					
FOTE	38				
GBTE	85	5		3	
SOTE					
BLSK	49	31	8	40	
LAGU	39	77	7	11	

Nesting/Use History

This island has become known as, White Pelican Island, since the pelicans moved here from the South Bird Island area in 1982. It has been one of the more productive islands as evidenced by the 20 different species of colonial waterbirds that have nested here.

A hard freeze in 1987 killed most of the salt cedar and reduced the quantity and quality of the remaining vegetation. Following the freeze, heron and egret abundance declined until 1994, when they were almost gone. During this same period, pelicans increased their activity driving the other birds away. A few great blue herons continue to build platforms in the salt cedars. Terns and black skimmers used the sand flats and sparsely vegetated ground on the southern end of the island. In 1988 for example, 920 royal, 360 Sandwich and 18 Caspian terns nested. Numbers began to decline and by 1992, all but the skimmers and gull-billed terns had left the island. The sandy areas that were favored by terns silted to form a hard substrate. Only the skimmers and gull-bill terns were left to use the sandy extensions on the southern end. In 2001, only pelicans and great blue herons nested.

Discussion and Management Recommendations

Recommendations:

1. Continue to manage the island for white pelicans.
2. During the fall and winter, vegetation on the crown should be removed or reduced, especially the grasses.
3. A few scattered mesquite trees could be planted to provide shade and serve as platforms for any returning herons and egrets.
4. If good dredge material is available, it can be deposited on the southern slope, where it meets the sand flat, to encourage the sand-nesters.
5. The PAIS needs to maintain large signs prohibiting human activity within 200 meters of this island.
6. Eliminate fire ant colonies on the crown and in the remains of the salt cedars.

Island 614-346

Old Name: (39) NM157-OM-75

Location

Latitude: 27.4038 **Longitude:** -97.3570 **Area:** N/A **Elevation:** 0.6 m
Length: N/A **Width:** N/A

Description

Ownership: Padre Island National Seashore

Impacts: N/A

Predators: none

Substrate types: sand and shell

Summary: This small island is located on the eastern side of the GIWW, near buoy 157. It has a central core of primarily halophytes surrounded by bare sand and very little shell.

Bird Survey 1997 - 2001

614-346	1997	5/19/98	5/20/99	5/15/00	5/29/01
TRHE	not surveyed				
SNEG					
REEG					
CATE	7				
ROYT	4				
FOTE					
GBTE	17				
BLSK	1				
LAGU	1				

Nesting/Use History

Bare-ground nesters were the first birds recorded in 1981, and included 44 Caspian, 8 Forster's and one pair of gull-billed terns along with one pair of skimmers. These species continued to nest here intermittently. Herons and egrets appeared in 1984 and 1985, but rarely thereafter. This island is slowly disappearing.

Discussion and Management Recommendations

The island is in a good location, isolated and predator-free. Recommendations:

1. Adding material to enlarge the island would greatly benefit all species of colonial waterbirds.
2. A good substrate and suitable vegetation is also needed.
3. Install signs prohibiting human activity during nesting season.

Island 614-348

Old Name: (40)-NB-NM154- Yellow House

Location

Latitude: 27.4167 **Longitude:** -97.3587 **Area:** N/A **Elevation:** 0.7 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: one cabin

Predators: none

Substrate types: sand and shell

Summary: This small island is located west of GIWW marker 154. A large, bright yellow house on pilings is within 30 meters of the eastern shore. The vegetation is primarily halophytes and pigweed. Shallow water surrounds the island with deeper water toward the King Ranch shoreline. At the edge of the deep water is a group of houseboats.

Bird Survey 1997 - 2001

614-348	5/21/97	5/19/98	5/20/99	5/15/00	6/1/01
GBTE	not			not	
BLSK	surveyed			surveyed	

Nesting/Use History

In early years there was a house on the island that affected the presence of birds. By 1988, the older house was replaced by the yellow house and gull-billed terns and skimmers were nesting on the island. They nested again in 1996.

Discussion and Management Recommendations

This is a fairly good island except for the house. Recommendations:

1. Deposition of material in the center might attract ground-nesters back to the island.

Island 614-344

Old Name: (41) NM152-OM72

Location

Latitude: 27.4222 **Longitude:** -97.3561 **Area:** N/A **Elevation:** 1.2 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: one cabin

Predators: none

Substrate types: sand and shell

Summary: This island is located west of the GIWW, near marker 152. It was a small island that was enlarged with dredge material on the northwestern side. The vegetation is low and dense except at the crown near the northeastern corner. There is a ring of bare ground around the southern margins of the recent deposition. The well-constructed cabin is among older vegetation on the eastern margin of the original island. The vegetation is typical of younger islands - many halophytes, wolfberry, sea lavender, saltgrass, false ragweed and pigweed.

Bird Survey 1996 – 2001

614-344	5/23/96	5/21/97	5/19/98	5/20/99	6/1/01
CATE			22		6
FOTE					
GBTE		11	18	9	15
LETE					
SOTE					
BLSK	21	19	34	65	32
LAGU	18	28	12	119	21

Nesting/Use History

Originally there was a commercial fisherman's shack on the eastern margin. In 1978, the shack was abandoned, but two domestic cats left behind kept the island free of nesting birds. The cats were removed the next year at the close of the nesting season. In 1980 the terns and skimmers returned to the island in fair numbers. Additional dredge material was deposited in 1983 and the next year large numbers of each species in the table (above) nested. In the mid-1980s, a new owner purchased the permit and built a cabin and long pier extending to the north. Occupants walk through the nesting area to reach the cabin. Fledging success was probably held to a minimum. The birds returned in 1995 and nested on bare areas to the south, away from the cabin and the walking path and the birds continue to use this area. The present cabin users indicated that they stay away from the birds when nesting.

Discussion and Management Recommendations

This could be one of the better islands in this part of the Laguna Madre. Recommendations:

1. The cabin should be eliminated and the owners should be prohibited from selling or transferring the permit.
2. Establish trees and manage the vegetation.
3. Warning signs should be erected at the southern margin of the island.

Island 614-343

Old Name: (42) NM141-OM69

Location

Latitude: 27.4335 **Longitude:** -97.3422 **Area:** N/A **Elevation:** 0.7 m
Length: N/A **Width:** N/A

Description

Ownership: Padre Island National Seashore

Impacts: N/A

Predators: fire ants

Substrate types: serpulid and coquina reef rock and cobble, sand and shell

Summary: This long island lies east of marker 141. The island has a surrounding berm and a lower area in the center. Four high points on the eastern side grade to the berm and to the low, middle ground. On the southern end are two brackish water pits and an accreting sandbar on the tip. The vegetation consists of a lot of halophytes in the low area - mostly sea purslane, which covers 30 percent of the island. There is saltgrass, wolfberry, false ragweed and a small amount of scattered sea oxeye on the higher ground.

Bird Survey 1997 – 2001

614-343	5/21/97	5/19/98	5/20/99	5/15/00	5/29/01
GBHE					
LBHE					
TRHE		12	10	7	1
SNEG					
REEG	1	2	9	2	
WFIB					
CATE	16				
ROYT					
SATE					
FOTE	95		1	4	
GBTE	84	21	20		21
BLSK	20	12	28	2	16
LAGU	140	189	126	245	38

Nesting/Use History

Recorded use of this island dates to 1977 when nests for 25 gull-billed terns and 23 skimmers were recorded. The number and species of birds increased in 1981 with the addition of the other terns and laughing gulls. Caspian terns were a fixture on this island from 1983 to 1997. More have consistently nested on this island than on any other in the upper Laguna Madre.

Hérons, egrets and white-faced ibis appeared in 1983 and 1984. Since 1995 these shrub-nesters have decreased, probably due to the increase of laughing gulls, which numbered over 100 pair each year. The lack of tri-colored herons and reddish egrets in 2001 could be due to the lack of rain and the death of the sea oxeye on the higher areas.

Discussion and Management Recommendations

This has been a good island for a variety of colonial waterbirds because of its isolation and protective signs. Recommendations:

1. Modify signs to prohibit human activity within 200 meters of the island year-around.
2. Deposition of good material would enlarge and enhance the site.
3. Establish mesquites and granjeno trees on the higher areas to attract tree-nesters.
4. Fire ants on all the islands should be eliminated.

Island 614-342A

Old Name: (43) NM131-OM65

Location

Latitude: 27.4522 **Longitude:** -97.3321 **Area:** N/A **Elevation:** 0.9 m
Length: N/A **Width:** N/A

Description

Ownership: Padre Island National Seashore

Impacts: N/A

Predators: fire ants

Substrate types: serpulid and coquina reef rock and cobble, sand and shell

Summary: This small island is located east of the GIWW, near marker 131. Sand is accreting on the eastern margin and on each end of the vegetated portion. Sea purslane covers 90 percent of the island. There is pigweed around the margin and some wolfberry and sea oxeye on the higher areas.

Bird Survey 1997 – 2001

614-342A	5/21/97	5/19/98	5/20/99	5/15/00	5/29/01
TRHE		1			
SNEG					
REEG					
WFIB					
CATE	15		70	6	2
ROYT	22	4/2P	200	460	
SATE			10	180	
FOTE					
GBTE		16/11P			
BLSK		38/19P			4/2P
LAGU	14/10P	120/84P	45/32P	4/3P	6/4P

Nesting/Use History

The records begin in 1977 with 62 nests of Forster's terns, 30 pair of skimmers and 14 nests of gull-billed terns. Six pair of laughing gulls in 1979 and 12 pair of Caspian terns in 1980 joined these bare-ground nesters. The number of Caspian tern pairs increased to a maximum of 100, which then alternated or divided nesting between this island and the previous one (614-343). A few royal and Sandwich terns nested here in later years. The first shrub nesters were two pair of tri-colored herons in 1983. They appeared intermittently in succeeding years, usually as two or three pair. A pair of white-faced ibis was present only in 1984 and a

pair of snowy egrets nested twice in 1989 and again in 1991. A reddish egret pair was present in 1990 and again in 1995.

Discussion and Management Recommendations

Recommendations:

1. Maintain this island for nesting terns and skimmers.
2. The removal of some sea purslane to expose more bare sand and shell would be desirable.
3. Eliminate fire ants.
4. Erect signs to prohibit human activity within 100 meters of the shoreline year-around.

Island 614-342B

Old Name: (44) NM127-OM63

Location

Latitude: 27.4594 **Longitude:** -97.3283 **Area:** N/A **Elevation:** 1.0 m
Length: N/A **Width:** N/A

Description

Ownership: Padre Island National Seashore

Impacts: N/A

Predators: fire ants

Substrate types: serpulid and coquina reef rock and cobble, sand and shell

Summary: This small island is located east of the GIWW, near marker 127. Sand is accreting on the eastern margin and on the long spit at the southern end. Several large concrete blocks form the high point on the north end. Vegetation here consists of wolfberry and sea oxeye. The rest of the island is covered with sea purslane, pigweed and glasswort. There are three deposit pits on the island.

Formation and depositional history for this island can be found in Chaney (1978).

Bird Survey 1997 – 2001

614-3343B	5/21/97	5/19/98	5/20/99	5/15/00	5/29/01
GBHE					
TRHE		1			
REEG					
CATE					
ROYT				2	
FOTE					26
GBTE	4	4		3	6
LETE					
SOTE	2				
BLSK		4	22	12	20
LAGU		70	11	6	7

Nesting/Use History

In 1976, a single great blue heron nest was found in the sea oxeye on the north end of the island and 23 scrapes of skimmers were observed on the sand spit. The single nest was used the following year and again in 1988 and 1990. A single pair of reddish egrets nested in 1985. Single pairs of tri-colored herons used the island intermittently from 1988 to 1998. Small numbers of gull-billed terns nested almost every year. Skimmers were present in larger numbers every year. Thirty Forster's terns were counted in the sparse vegetation at the

southern end in 1989 and 26 were found there again in 2001. Small numbers of Caspian terns were listed for several years beginning in 1980. Royal and least terns nested here only twice and in small numbers. Unusual nesters included sooty terns, which were present as a single pair in 1984 and as two pair in 1998.

Discussion and Management Recommendations

This island should be treated the same as the preceding one. Recommendations:

1. Manage and maintain this island for nesting terns and skimmers.
2. Remove some halophytes to expose more shell and sand substrate. Accreting sand on the southern spit should also help.
3. Eliminate fire ants.
4. Erect signs to prohibit human activity within 200 meters of the shoreline year-around. Human tracks have been seen during censuses on several years.

Island 614-341A

Old Name: (45) NM117A-OM57A

Location

Latitude: 27.4794 **Longitude:** -97.318278 **Area:** N/A **Elevation:** 3.0 m

Length: N/A **Width:** N/A

Description

Ownership: Padre Island National Seashore

Impacts: N/A

Predators: coyotes, badgers and fire ants

Substrate types: sand and shell

Summary: This island is located just north of the Bird Island Basin Channel and is one of four islands, more or less joined together by deposition. Several deposits have been made on this large island.

Vegetation on the island suffered as a result of drought and bare areas are found on the northern and northeastern parts. The rest of the island is densely vegetated with sea oxeye, prickly pear, sea lavender, pigweed, cordgrass, false ragweed, saltgrass, lantana, camphor daisy, Indian blanket and scarlet pea. Around the island margins are wolfberry and typical halophytes. A line of partially dead salt cedars extends across the center of the island and another group is present on the southwestern corner. Near the latter group is a large stand of mesquite. A large mesquite and several granjeno trees are growing on the northwestern corner. It is these trees which host nesting great blue herons, black-crowned night-herons, great egrets, cattle egrets, roseate spoonbills and some snowy egrets. The other large wadingbirds are nesting in, or on the sea oxeye and prickly pear.

Formation and depositional history of this and the following three islands can be found in Chaney et al (1978).

Bird Survey 1997 – 2001

614-341A	5/21/97	5/19/98	5/20/99	5/15/00	5/29/01
GBHE	6	8	6	12	16/8N
LBHE	8	30	30	6	16
BCNH	2	7	6	2	3
TRHE	150	174	108	40	48
GREG	2	12	14	12	5
SNEG	150	200	50	51	26
REEG	75	82	28	31	8
CAEG	102	70	50	34	
ROSP	6	6	7	12	12
WFIB	320	22	4	2	

614-341A	5/21/97	5/19/98	5/20/99	5/15/00	5/29/01
WHIB	4	10	8	9	
GBTE					
BLSK					
LAGU	805	1260	1225	420	357

Nesting/Use History

Records since 1973 indicate a great variety of birds have heavily occupied this island. During several different years, as many as 320 white-faced ibis, 200 snowy egrets and tri-colored herons and 82 reddish egrets have nested in the sea oxeye and prickly pear. The 320 white-faced ibis and 82 reddish egrets observed were more than any other island in the upper Laguna Madre. White ibis made their first appearance in the area on this island in 1977 when three nests were found. Their numbers have increased in recent years. The gull-billed terns and skimmers were counted once on the bare sand at the northern end of the island in 1982. Laughing gulls have always been present in high numbers, usually more than 1,000 pair. Overall, the species count and abundance has decreased in recent years. Most of those counted were either in the trees or nesting in a dense stand of sea oxeye and prickly pear on the south central part of the island. The density of the prickly pear prevents the approach of any predator.

Discussion and Management Recommendations

This island is one of the more important ones in the upper Laguna Madre. Badger and coyote tracks have been observed during bird surveys of this island. Recommendations:

1. Manage the island for herons, egrets, spoonbills and ibises.
2. Monitor for predators before and during the nesting season each year. Tracks can be easily seen on the bare, moist sand between this and the adjacent northern island.
3. Predators should be captured and removed.
4. Establish new trees and bushes and selectively remove of some of the prickly pear.
5. Any action to discourage nesting laughing gulls is desirable.
6. Replace present signs with postings that prohibit human activity within 100 meters of the shoreline year-around.
7. Disturbance during census counts should be kept to a minimum.

Island 614–341B

Old Name: (46) NM115–OM57

Location

Latitude: 27.482538 **Longitude:** -97.316464 **Area:** N/A **Elevation:** 6.7 m

Length: N/A **Width:** N/A

Description

Ownership: Padre Island National Seashore

Impacts: N/A

Predators: coyotes and fire ants

Substrate types: shell and sand

Summary: This island is located near GIWW marker 101 and is the middle of three islands joined or almost joined by deposits between them. There are some bare areas at the northern edge of the island and on elevated deposit sites at the northeastern and southeastern corners. Between these two high points there is a low algal flat connected to the northern bare area by a narrow channel. Between this and the southern island there is a large bare area with scattered halophytes. The vegetation is very similar to that of the preceding island (614–341A). The ridgeline of the original island contains a dense stand of mesquite, scattered oleanders and false willow. At the northeastern end is a large clump of salt cedar with extensive growths of prickly pear that grade into sea oxeye, shoregrass, wolfberry and various halophytes.

Bird Survey 1997 – 2001

614-341B	5/21/97	5/19/98	5/20/99	5/15/00	5/29/01
GBHE	6	12	5	6	8
LBHE			5	2	
BCNH	10	10	10	8	1
TRHE	12	28	32		14
GREG	10	25	28	8	13
SNEG	28	45	16		40
REEG	54	35	20		10
CAEG	25	12	4		10
WHIB	20	1	1		
WFIB	130	14	1		
ROSP	15	22	30	30	22
CATE					
ROYT	830	480	700		
SATE	6	28	86		
GBTE		1	13		
SOTE		1			

614-341B	5/21/97	5/19/98	5/20/99	5/15/00	5/29/01
BLSK					
LAGU	595	770	980	560	420

Nesting/Use History

The nesting history of this island is similar to the preceding one (614-341A), i.e. it had the same number of species but not as many individuals. This island had a greater number of black-crowned night-herons, a single pair of sooty terns and many royal and Sandwich terns. The royal and Sandwich terns appeared between the two islands when dredge material was deposited there. In 1973, 2,500 royal and 2,000 Sandwich terns were counted on the bare ground.

In 1978, PAIS personnel counted 7,000 Sandwich terns. This count must be an erroneous and probably resulted from adding a zero to the more likely observation of 700 birds. This explanation is further supported by the fact that there have never been 7,000 Sandwich terns recorded for the entire upper Laguna Madre.

In later years, terns moved to the bare areas on the summits of the two eastern high points. Their numbers and occurrence vacillated in later years, probably due to the presence of predators. Great blue herons, black-crowned night-herons, great egrets, some snowy and cattle egrets nested in the trees, others on the sea oxeye, prickly pear and on the ground. Laughing gulls nested on the island in large numbers during every year since the beginning of individual records in 1973. The loss of terns and skimmers and the reduction in numbers of the other birds during the last two years is probably due to predation.

Discussion and Management Recommendations

Management practices for this island are almost identical to the preceding one (614-341A). Recommendations:

1. Manage this island for bare-ground nesters including terns and skimmers.
2. Closely monitor the island for predators before and during the nesting season.
3. The encroachment of plants onto the bare ground should be checked with Roundup or by mechanical means. If the former is used, it should be done shortly before the nesting period – if done too early, re-growth will occur.
4. The oleanders and false willow should be replaced with mesquite trees and native shrubs. The extent of the prickly pear should be reduced.
5. Erect nesting platforms.

Island 614-341C

Old Name: NM (47) 113A- OM55A

Location

Latitude: 27.486481 **Longitude:** -97.314559 **Area:** N/A **Elevation:** 3.5 m

Length: N/A **Width:** N/A

Description

Ownership: Padre Island National Seashore

Impacts: N/A

Predators: coyotes

Substrate types: shell and sand

Summary: Deposition on this island has not been as frequent as the previous two and as a result, it has retained its round shape. The eastern and western sides slope up to a narrow ridge and central summit. The summit contains dense growths of prickly pear with scattered living and dead lantana. There is scattered false ragweed and wild indigo that grade on the slopes into more prickly pear, sea oxeye, saltgrass, shoregrass and wolfberry. There are thick stands of halophytes at the shore. The lower southern end has ten young salt cedars and one sprawling mesquite tree nearer the center. Fifteen meters to the north is a clump of four large mesquite trees, Indian blanket and primrose. The north end has one isolated salt cedar. There is a small amount of bare ground on the northern and southern margins.

Bird Survey 1997 – 2001

614-341C	5/21/97	5/19/98	5/20/99	5/15/00	5/29/01
AWPE					
GBHE	7	3	4	8	7
LBHE					
BCNH	24	8	7	4	10
TRHE	6		36		25
GREG	22	16	16	4	19
SNEG	12	1	1		10
REEG	30	1	6		12
CAEG	14				2
WHIB	5				
WFIB	50		5		
ROSP	15	12	12	20	12
GBTE					
SOTE					
BLSK					
LAGU	840	630	525	175	280

Nesting/Use History

The same species that nested on island 614-341A have also nested here with two exceptions. In 1981, 98 white pelicans nested here and 25 returned the next year. A pair of sooty terns nested in 1973. Nesting by other species is similar to other nearby islands; great blue herons, black-crowned night-herons, roseate spoonbills, great, cattle and some snowy egrets in the trees; tri-colored herons, reddish and snowy egrets, ibises and laughing gulls on the sea oxeeye, prickly pear or the ground. Black-crowned night-herons nested here in greater numbers than on the other two islands. Coyote tracks were found on this island in 2000, explaining the lower number of nesters that year.

Discussion and Management Recommendations

This is another good island in this area of the Laguna Madre. Recommendations:

1. Manage this island for herons and egrets.
2. Predators must be controlled by monitoring closely prior to, and during the nesting season.
3. If tracks are found, traps should be set to remove the predator from these islands.
4. Plant more trees and shrubs. Remove most of the prickly pear and allow it to be replaced by woody, herbaceous plants.

Island 614-341D

Old Name: (48) NM 113-OM55

Location

Latitude: 27.489458 **Longitude:** -97.313108 **Area:** N/A **Elevation:** 2.0 m

Length: N/A **Width:** N/A

Description

Ownership: Padre Island National Seashore

Impacts: N/A

Predators: coyotes and fire ants

Substrate types: shell, sand and silt

Summary: This island is located east of marker 113 and is more separated from the three previous islands and not as high. There is a small bare area on the northern margin and a large one on the southern end that is often inundated during high tides. The center of the island contains two large stands of trees that blend together; the western one is a very large mesquite and the eastern one is a cluster of many popinac or leadball trees that are re-growing after the 1987 freeze. The trees are surrounded by a very dense growth of prickly pear with scattered sea oxeye. The prickly pear and sea oxeye patches extend to the north, almost to the margin of the northern point. There is an isolated leadball tree near the southern margin of the vegetation. False ragweed and halophytes are growing around the margins of the prickly pear and sea oxeye.

This island was formed between April 1947 and March of 1948. For more detail about the island's early development see Chaney et al (1978).

Bird Survey 1997 – 2001

614-341D	5/21/97	5/19/98	5/20/99	5/15/00	5/29/01
AMWP					
GBHE	22	8	10	12	7
LBHE	12	8	3		2
BCNH	6	2	14	12	2
TRHE	34	24	40		70
GREG	42	35	42	18	25
SNEG	44	6	6	2	20
REEG	52	12	9		10
CAEG	75		2		2
ROSP	33	26	16	20	12
WHIB			3		
WFIB	66	1	2		
GBTE					

614-341D	5/21/97	5/19/98	5/20/99	5/15/00	5/29/01
BLSK					
LAGU	840	840	980	560	245

Nesting/Use History

Early PAIS records (1975) indicate that nesters were using only the trees and the bare ground. Three hundred sixty-one pair of cattle egrets, seven great blue herons and two snowy egrets were nesting in the trees, and two pair of gull-billed terns and skimmers were nesting on the bare ground. Because of a tick infestation on white pelicans on South Bird Island or the presence of coyotes, white pelicans moved to this island to nest on the bare ground beneath the leadball trees in 1975. Some continued to nest here in later years – 35 in 1976, 120 in 1977, none in 1978 (PAIS), 24 in 1979, 144 in 1980 and 42 in 1990. Most birds moved to island 614-345 by 1991. Cattle egrets were the first tree-nesters to fill the trees in the early years with over 400 pair in some years. In 1978, PAIS recorded 1,700 pair of cattle egrets. This number is questionable since only 150 were present the preceding year and 160 the following year. Their numbers have drastically dropped in the last five years. Black-crowned night-herons followed the same pattern; large numbers in the early years followed by a decrease due in part to the denuding of leadball trees following the freeze of 1987. Reddish egrets and tri-colored herons have nested in good numbers throughout the years using the prickly pear and sea oxeye. Nine pair of little blue herons appeared on this island in 1983 and this species continues to nest, usually in the trees. The first gull nested in 1977 when there were 49 pair present. They have increased in later years to almost 1,000 pair in some years. The reduction in species numbers in 2000 was due to the presence of coyotes on the island as evidenced by tracks. No tracks were found in 2001.

Discussion and Management Recommendations

Recommendations:

1. Manage this island for herons, egrets, ibises and spoonbills.
2. Most importantly, the island should be systematically monitored year-around for predators, especially during the early nesting season.
3. If predators are found, they should be removed.
4. Plant mesquite trees to replace the leadball trees if they are again frozen. Selectively remove some prickly pear.
5. Dredged material should not be placed on this island.
6. Install signs prohibiting human activity from January through October.

Island 641–340

Old Name: (49) South Bird Isl.

Location

Latitude: 27.492685 **Longitude:** -97.305742 **Area:** N/A **Elevation:** 1.2 m

Length: N/A **Width:** N/A

Description

Ownership: N/A

Impacts: N/A

Predators: coyotes, raccoons, fire ants and grackles

Substrate types: sand, shell and silt

Summary: This long, narrow, natural island is located just northeast of the previous one (614–341D). The island margins, especially on the western side, are higher than the central part. On the northwestern margin there is a large patch of prickly pear and several very large Spanish daggers containing several nesting platforms. Other groups of prickly pear are scattered along the western margin among some thick stands of sea oxeye. Sea oxeye is also distributed throughout the higher parts of the island. The low interior of the island contains wet areas that cover one third of the island. These wet areas contain blooms of bacteria and algae. Around the wet areas and covering much of the interior are various halophytes, mostly sea purslane. The southern tip of the island contains a small amount of bare sand and shell.

Bird Survey 1997 – 2001

641-340	5/21/97	5/19/98	5/20/99	5/15/00	5/29/01
AMWP					
GBHE	2	2	1	1	2
LBHE	1			1	
BCNH	2				
TRHE	1			5	10
GREG					1
SNEG					1
REEG	10			2	2
CAEG					
ROSP					
WHIB					
WFIB	4				
ROYT					
SATE					
FOTE	32				60
GBTE	21				
BLSK					

641-340	5/21/97	5/19/98	5/20/99	5/15/00	5/29/01
LAGU	2800	3990	3640	2800	2240

Nesting/Use History

Observations in the 1800s recorded very high numbers of pelicans and other wadingbirds on this island. Evidently, the island has subsided since it could not support the reported numbers at its present size. There is no doubt that it has been an attractive island to a great variety and number of birds.

More recent observations from 1973 counted 1,050 laughing gulls, 225 white pelicans, 110 reddish egrets, 100 great blue herons, 87 snowy egrets, 32 tri-colored herons, 12 great egrets and 7 white-faced ibis. Later counts reflect the addition of new species and fluctuations in the number of individuals. In 1974, PAIS personnel counted 500 snowy and 250 cattle egrets. In 1976, 4,200 laughing gulls, 550 royal terns, 420 Sandwich terns, 250 white-faced ibis and 95 roseate spoonbills joined the herons and egrets. In the following year, an additional 54 pair of white ibis appeared. Since 1981, the total number and species count has declined, except for laughing gulls. White pelicans and spoonbills left the island and never returned. This could be due to predators as evidenced by the removal of a coyote from the surrounding water in 1981. In the previous year, only 52 pelicans of the usual 350 were counted. Twelve, apparently abandoned chicks, were found dead. Today, there are few great blue herons and great egrets nesting on the Spanish daggers; other herons and egrets use the prickly pear and sea oxeye, and the terns and skimmers use the sandy southern point.

Discussion and Management Recommendations

Recommendations:

1. This island (and the four to the south) must be monitored for predators frequently, especially early in the nesting season.
2. Deposition of good material in the center of this island is desirable and could bring back its historical productivity.
3. Plant trees and shrubs on the new material. If this cannot be done, leave the island to the laughing gulls. This may keep some from nesting on the nearby islands where other birds nest in large numbers.

Island 614–306

Old Name: (50) North Bird Isl.

Location

Latitude: 27.520494 **Longitude:** -97.290352 **Area:** N/A **Elevation:** 0.9 m

Length: N/A **Width:** N/A

Description

Ownership: Padre Island National Seashore

Impacts: N/A

Predators: N/A

Substrate types: sand, shell and silt

Summary: This natural island is located north of the previous one (641–340) and east of the GIWW dredge material islands. The shape is similar to the previous one, but reversed with the narrow end on the north and the broad end to the south. The center of the island is lower than the outer margins and contains several areas of dry sand and little vegetation. Most of the vegetation is low and herbaceous, also characteristic of previous islands.

Bird Survey 1997 – 2001

614-306	6/19/97	5/20/98	5/20/99	5/15/00	5/29/01
ROYT	not surveyed				
FOTE					
GBTE					
BLSK					

Nesting/Use History

According to the earliest observations (1973), birds did not nested here until 1993 when 26 Forster's terns, 10 gull-billed terns, 3 royal terns and 4 pair of black skimmers nested on the sandy, southern tip of the island. The Forster's and gull-billed terns returned the following year.

Discussion and Management Recommendations

The reason why birds do not nest on this island is unknown. It could be the ease of predator access from Padre Island, or the absence of proper vegetation for shrub- and tree-nesters. The proximity of South Bird Island and its historically high bird counts also detracts from this island as a nesting site. Recommendations:

1. Predator access must be controlled.
2. Deposition of material to raise the elevation is desirable.

3. Plant trees and shrubs following deposition.
4. During the early years of deposition, the bare ground would be ideal for terns and skimmers.

Island 614-305A

Old Name: (51) NM103-OM51

Location

Latitude: 27.507277 **Longitude:** -97.302741 **Area:** N/A **Elevation:** 4.0 m

Length: N/A **Width:** N/A

Description

Ownership: Padre Island National Seashore

Impacts: N/A

Predators: coyotes and fire ants

Substrate types: large shell, sand and silt

Summary: This large, round island was formed in 1947 and/or 1948 from deposits at each end. A large dike was constructed on the eastern side around 1970 and was subsequently filled with dredge material. There is oleander, false willow and salt cedar trees on the eastern slopes of the dike and a palm tree at the northern end. There is a pond surrounded by cattails on the southwestern corner. Other vegetation found on the slope including cordgrass, false ragweed, necklace pod, sea oxeye and various other grasses. The southern part of the dike's interior contains a large area of rough, almost bare ground. Numerous false willow trees are scattered and grade into a pond at the northern end where a variety of herbaceous plants are found.

For more details about the island's history, see Chaney et al (1978).

Bird Survey 1997 – 2001

614-305A	1997	5/20/98	5/20/99	5/15/00	5/29/01
CATE	not surveyed				

Nesting/Use History

In 1977, shortly after the deposits in the dike ceased, a pair of Caspian terns successfully nested on the bare ground. Least terns and skimmers attempted to nest the same year, but were not successful. Various large birds have used the trees on the island as loafing sites.

Discussion and Management Recommendations

This island and the chain of northern neighbors are not good candidates for colonial waterbird management. Coyote tracks have been observed every year since 1988 and raccoon tracks were discovered in 2001. Several predators were trapped and removed in past years, but it did not prevent their return. Keeping these islands predator-free would require too much time, effort and money. These islands could be good for tropical migrants, if more trees and shrubs were planted. The presence of the fresh water also helps.

Island 614-305B

Old Name: (52) NM101A-OM49A

Location

Latitude: 27.510538 **Longitude:** -97.301289 **Area:** N/A **Elevation:** 2.4 m
Length: N/A **Width:** N/A

Description

Ownership: Padre Island National Seashore

Impacts: N/A

Predators: coyotes and fire ants

Substrate types: sand, shell and silt

Summary: This formation and nesting trends of this island are very similar to others in this group. The eastern half has been formed into a diked spoil area. There are salt cedar and oleander surrounded by agave and prickly pear on the non-diked western portion. The rest of the vegetation is similar to that on the other islands in this group. The interior of the dike contains areas of rough, bare ground dotted with false willow trees and herbaceous plants.

Bird Survey 1997 – 2001

614-305B	1997	5/19/98	5/20/99	5/15/00	5/29/01
GBHE	not surveyed	1	1		
BCNH					
CATE					
FOTE					
GBTE					
LETE					
BLSK					

Nesting/Use History

In 1973, 45 pair of least terns and 4 pair of gull-billed terns and black skimmers nested on the new dredged material in the diked area. In later years, the terns returned once to nest and the skimmers twice. Caspian and Forster's terns tried nesting during two seasons, the former in 1977 and the latter in 1985. The black-crowned night-herons and great blue herons reported are probably loafers resting in the trees.

Discussion and Management Recommendations

The island would be good for PAIS to develop into a public recreation island. There is a deep-water channel that ends at the shore on the southwestern corner of the island and

opportunities for camping, picnicking, bird watching, etc. would be available.

Recommendations:

1. The control of the predators would be a massive undertaking and not worth the effort. However, trapping and removing predators each winter would help reduce their numbers.
2. Remove the oleanders and replace with mesquite trees and shrubs. This could help the migrants.

Island 614-305C

Old Name: (53) NM101-OM49**Location**

Latitude: 27.513113 **Longitude:** -97.299934 **Area:** N/A **Elevation:** 2.8 m**Length:** N/A **Width:** N/A**Description**

Ownership: Padre Island National Seashore**Impacts:** N/A**Predators:** coyotes and fire ants**Substrate types:** sand, shell and silt

Summary: This large, mostly barren island has a large grove of leadball trees just west of the central crown. Prickly pear surrounds these trees and is also found in scattered clumps on the higher areas. There is a salt cedar on the northwestern corner and scattered leadball trees on the eastern side. The lower areas are covered with the salt tolerant species that are characteristic of the other islands. This island and the previous one (614-305B) are joined together by a broad band of bare sand with some scattered halophytes.

Bird Survey 1997 – 2001

614-305C	1997	5/20/98	5/20/99	5/15/00	5/29/01
GBTE	not surveyed				
LETE					
BLSK					

Nesting/Use History

Nesting history dates to the early days of the island's formation when there was little vegetation. The earliest observations in 1973 and 1977, show gull-billed terns, least terns and skimmers nesting in small numbers, but never in later years. Coyote tracks were present in 1980 and in later surveys, but could have been overlooked on earlier surveys.

Discussion and Management Recommendations

Management recommendations for colonial waterbirds are similar for the entire group of islands. Recommendations:

1. Control the predators and closely monitor.
2. Plant native trees and shrubs.

Island 614–305D

Old Name: (54) NM97A–OM47A

Location

Latitude: 27.516375 **Longitude:** -97.298772 **Area:** N/A **Elevation:** 1.2 m

Length: N/A **Width:** N/A

Description

Ownership: Padre Island National Seashore

Impacts: N/A

Predators: coyotes, raccoons and fire ants

Substrate types: sand, shell and silt

Summary: This island is separate from the others in the group and was formed in 1947 and 1948. Presently, this low island contains some salt cedar on the northern and western slopes of the central crown. The rest of the vegetation is similar to that of the other islands in this group.

For a more detailed history of this and the following island see Mendoza (1974), Ortiz (1974) and Chaney et al (1978).

Bird Survey 1997 – 2001

614-305D	1997	5/20/98	5/20/99	5/15/00	5/29/01
GBTE	not surveyed				
LETE					
BLSK					

Nesting/Use History

The island was only used for nesting when there were large amounts of bare ground and little vegetation. Gull-billed terns, least terns and skimmers were observed in 1973. Skimmers were again observed in 1976, least terns in 1977, and both in 1985. Great blue herons, black-crowned night-herons and great egrets use the mature salt cedar for resting and roosting.

Discussion and Management Recommendations

Raccoons are a recent addition to the predator populations on these islands.

Recommendations:

1. Control the predators.

Island 614-305E

Old Name: (55) NM97-OM47**Location**

Latitude: 27.519121 **Longitude:** -97.296933 **Area:** N/A **Elevation:** 1.5 m**Length:** N/A **Width:** N/A**Description**

Ownership: Padre Island National Seashore**Impacts:** N/A**Predators:** coyotes, raccoons and fire ants**Substrate types:** sand, shell and silt

Summary: This island is located just north of the previous one (614-305D). The western slope of the crown contains several scattered salt cedar trees and the northern slope has a stand of leadball trees surrounded by prickly pear. There are scattered leadball trees on the eastern side and prickly pear near the central summit. The remaining vegetation is like that of other islands in this group.

Bird Survey 1997 – 2001

614-305E	1997	5/20/98	5/20/99	5/15/00	5/29/01
LETE	not surveyed				

Nesting/Use History

Early records for this island began in 1980 when coyote tracks were found. It was not surveyed again until 1992. Four pair of least terns were counted on the bare ground in 1993. Since then, only coyote tracks have been found.

Discussion and Management Recommendations

The vegetation and bare ground on all of these islands is good for nesting colonial waterbirds. Recommendations:

1. The predators must be controlled before the birds will immigrate to this island.

Island 614-305F

Old Name: (56) NM95-OM45

Location

Latitude: 27.521954 **Longitude:** -97.295772 **Area:** N/A **Elevation:** N/A

Length: N/A **Width:** N/A

Description

Ownership: Padre Island National Seashore

Impacts: N/A

Predators: coyotes and fire ants

Substrate types: sand, shell and silt

Summary: This small, diked island has low areas south and west outside the dike. Mesquite trees are located on the northern rim, the crown of the interior and along the eastern side of the area outside of the dike. The interior of the dike contains a number of brasil shrubs. The rest of the vegetation consists of grasses, forbs and halophytes.

Bird Survey 1997 – 2001

614-305F	1997	5/20/98	5/20/99	5/15/00	5/29/01
GBTE	not surveyed				
LETE					
BLSK					

Nesting/Use History

Nesting birds were only observed in 1993. Forty-six pair of least terns, 35 pair of black skimmers and eleven pair of gull-billed terns constructed nests on the barren ground inside the dike.

Discussion and Management Recommendations

Coyote tracks have been observed since 1980 and their presence influences any management suggestions for this island.

Island 614-305G

Old Name: (57) NM93-OM43**Location**

Latitude: 27.525644 **Longitude:** -97.294127 **Area:** N/A **Elevation:** 2.5 m**Length:** N/A **Width:** N/A**Description**

Ownership: Padre Island National Seashore**Impacts:** N/A**Predators:** coyotes and fire ants**Substrate types:** sand, shell and silt

Summary: This is the northernmost island of the chain that belongs to the Padre Island National Seashore and was formed between 1945 and 1947. There is a deep channel that separates this island from the island to the south. Tanks, pipes and items belonging to a gas and petroleum company have been recently removed from the north end. The north end has a large salt cedar, oleander and two brasils. The central core contains other brasils and two large Australian pines. On the crest there are more oleander, necklace pod, a leadball and a large mesquite tree. The rest of the island is covered with grasses, patches of prickly pear, halophytes and other forbs. There is very little bare ground other than a dry pond at the southern end and some oil spill areas near the center.

For more detailed information about this island, see Chaney et al. (1978).

Bird Survey 1997 – 2001

614-305G	1997	5/20/98	5/20/99	5/15/00	5/29/01
GBHE	not surveyed				
LETE					
GBTE					
BLSK					

Nesting/Use History

The terns and skimmers were found only during the early years of vegetation growth (1973 and 1976). A single great blue heron nest was found in the trees along with 22 individuals in 1993. Black-crowned night-herons and great egrets have also used the trees for loafing and roosting in some years.

Discussion and Management Recommendations

This island could be managed in the same fashion as 614–305B in this group.

Recommendations:

1. This would be an even better island to develop than 614–305B for recreational purposes. Landings could be made from the deep channel at the northern end of the island.
2. Predators must be removed.

Island 614-304A**Old Name:** (58) NM92-OM42**Location****Latitude:** N/A**Longitude:** N/A**Area:** N/A**Elevation:** 0.0 m**Length:** N/A**Width:** N/A**Description****Ownership:** Texas General Land Office**Impacts:** N/A**Predators:** none**Substrate types:** sand and shell

Summary: This small island was created in the early 1980s during construction of a side channel westward from GIWW marker 92. Halophytes were the only plants that developed on the island before it subsided.

Bird Survey 1997 – 2001

614-304A	5/21/97	5/20/98	5/20/99	5/15/00	5/29/01
TRHE	remnant	submerged	submerged	submerged	submerged
SNEG					
CATE					
GBTE					
BLSK					
LAGU					

Nesting/Use History

Gull-billed terns, skimmers and laughing gulls nested here in 1984. A pair of Caspian terns joined the group the next year along with a tri-colored heron. A pair of snowy egrets appeared in 1990. Larger birds nested only one season, and others nested intermittently until 1994, when the island was mostly submerged.

Discussion and Management Recommendations

This island should be abandoned as a site for nesting of colonial waterbirds. The next island along this channel has a much better foundation and nesting history.

Island 614-304B

Old Name: (59) NM90-OM42

Location

Latitude: 27.534592 **Longitude:** -97.297744 **Area:** N/A **Elevation:** 0.8 m

Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: fire ants

Substrate types: sand and shell

Summary: The channel west of GIWW marker 92 turns north and ends at a well site. This low, round island lies east of the channel and just short of the well site. Patches of halophytes and bare ground are found along the western side of the island. The crown contains pigweed, saltgrass, wolfberry, sedges and sea oxeye. The northern and eastern sides contain sea oxeye in addition to the typical halophytes.

Bird Survey 1997 – 2001

614-304B	5/21/97	5/20/98	5/20/99	5/15/00	5/29/01
TRHE	7	7			4
GREG			1		
SNEG			1		
REEG	5	10	5	4	2
CAEG					
WFIB					
ROSP					
CATE		2		1	
ROYT	3	4	1	38	
SATE					
GBTE	13	22		17	7
SOTE					
BLSK	6	18		1	8
LAGU	42	40	126	16	77

Nesting/Use History

Since its formation around 1980, this has been a very good small island for a variety of species. Earliest records (1984) list 540 royal terns, 168 laughing gulls, 4 tri-colored herons and 2 reddish egrets. Snowy egrets, a cattle egret, white-faced ibis, Sandwich terns and a sooty tern joined them the following year. Gull-billed terns and skimmers arrived in 1989

when the large birds were not present. The large wadingbirds were absent from 1989 to 1992, and again in 1996. Their absence could be associated with activity at the well site. A single pair of roseate spoonbills nested here in 1994, and Caspian terns were present in 1998 and 2000.

Discussion and Management Recommendations

It is in an ideal location, near good food sources and removed from predators and excess human activity. The variety and number of birds that have occupied this small island during certain years is amazing. In addition to its value as a rookery island, it is also a valuable loafing island. Often brown and white pelicans, roseate spoonbills, cormorants and a variety of shorebirds occupy the southwestern corner of the island. Recommendations:

1. Dredge material placed on the eastern side to enlarge the island would be desirable.
2. Establish shrubs and trees for herons and egrets.
3. Maintain bare ground for skimmers and terns. Monitor groundcover and remove excess vegetation as appropriate for these species.

Island 614-302A

Old Name: (60) NM80-OM42

Location

Latitude: 27.554183 **Longitude:** -97.286298 **Area:** N/A **Elevation:** 2.0 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: grackles and fire ants

Substrate types: sand, shell and silt

Summary: This island is located west of the GIWW, near marker 80. The southern end has been modified into a long, narrow east-west diked area. An abandoned cabin is nestled among some Australian pine trees at the center of the island. Bare areas are located on the western margin and at the eastern end of the diked area. A bare point of sand is forming at the southeastern corner. The high point of the island is located on the dike and vegetation here consists of primarily false ragweed grading into sea oxeye on the sides, then into pigweed, camphor daisy and halophytes in the lower areas. Elevation of the lower areas is approximately 0.75 meters.

Bird Survey 1997 – 2001

614-302A	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE	2		1	5	4
TRHE		5	6	14	4
GREG					5
REEG	1			5	
CATE		1		1	
GBTE	7				
BLSK	15	2	3	3	
LAGU	280	385	560	630	574

Nesting/Use History

The first records of nesting birds were gull-billed terns and skimmers on the southeastern corner in 1987. Terns continued to nest until 1998, and skimmers until 2001. Three pair of laughing gulls appeared in 1990 and their numbers steadily increased in later years. Herons and egrets appeared later. Great blue herons and great egrets nested in the pines and reddish egrets and tri-colored herons nested in the sea oxeye.

Discussion and Management Recommendations

This is a very good island because of its isolation, good shell foundation, good nesting sites for a variety of birds and the absence of large predators. However, the large number of laughing gulls is a problem. Recommendations:

1. The cabin ruins and pier should be removed or burned and not rebuilt.
2. Plant mesquite trees and various shrubs on the western side.
3. Bare ground areas should be checked every year - excess vegetation should be removed.
4. Install signs prohibiting human activity during nesting season.

Island 614-302B

Old Name: (61) NM79-OM37

Location

Latitude: 27.556425 **Longitude:** -97.277777 **Area:** N/A **Elevation:** 1.2 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: four cabins

Predators: coyotes and fire ants

Substrate types: shell, sand and silt

Summary: The three crowns of this island were once separate and distinct islands. There is a cabin associated with each crown and two with the northern one. A detailed description of the site will not be provided since it is not considered for management.

Bird Survey 1997 – 2001

614-302B	5/21/97	5/20/98	5/18/99	5/16/00	5/30/01
GBTE					
LETE					
BLSK					

Nesting/Use History

Two tern species and the skimmers were recorded in 1973 when the islands were relatively new. They have not been present since. Coyote tracks and scat have been observed.

Discussion and Management Recommendations

There are no recommendations to manage this island for nesting of colonial waterbirds.

Island 614-301A

Old Name: (62) NM71-OM35

Location

Latitude: 27.569761 **Longitude:** -97.270854 **Area:** N/A **Elevation:** 1.2 m

Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: three cabins

Predators: coyotes and fire ants

Substrate types: shell, sand and silt

Summary: This small, round island is near marker 71 and has recently joined its southern neighbors. A detailed description of the will not be provided since it is not considered for management.

Bird Survey 1997 – 2001

614-301A	5/21/97	5/20/98	5/18/99	5/15/00	5/30/01
LETE					

Nesting/Use History

In spite of the presence of coyotes, 46 pair of least terns attempted to nest on the bare ground in 1996.

Discussion and Management Recommendations

There is no way to economically manage this island for least terns or any other colonial waterbird.

Island 614-301B

Old Name: (63) NM72 OM34

Location

Latitude: 27.566221 **Longitude:** -97.278176 **Area:** N/A **Elevation:** N/A

Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: fire ants

Substrate types: shell, some sand and silt

Summary: This low island is located west of marker 72 on the GIWW. The crown of the island is on the north end and is covered with sea oxeye and camphor daisy. On the crown are sheets of plywood, part of an old duck blind, that cover two large fire ant colonies. The substrate slopes to a low area near the southern margin. This area is filled with wolfberry and typical halophytes. The rest of the island contains camphor daisy, false ragweed and some sea oxeye. There is one small growth of prickly pear on the northwestern corner.

Bird Survey 1997 – 2001

614-301A	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE					
TRHE				1	2
REEG			2		
CATE				1	
GBTE	7				
BLSK	21	6	4	25	32
LAGU	56	91	88	98	210

Nesting/Use History

Individual records begin in 1986 when 91 pair of laughing gulls and a single pair of great blue herons and tri-colored herons nested here. Reddish egrets began nesting in 1995. Herons and egrets continued to nest here intermittently. Gull-billed terns, Caspian terns and skimmers were present with the gulls in 1992. The gulls and skimmers have been persistent nesters on the island with the gulls steadily increasing in numbers.

Discussion and Management Recommendations

This is a very good island for colonial waterbird management. It is isolated from predators and humans. It has a good foundation and large areas to plant trees and shrubs. Birds presently using it will attract others. Recommendations:

1. Deposition of good material to raise the elevation is desirable.
2. Fire ants and prickly pear should be removed.
3. Install signs prohibiting human activity during the nesting season.
4. Discourage the gulls from nesting here.

Island 614-301C

Old Name: (64) NM63-OM33

Location

Latitude: 27.586659 **Longitude:** -97.261926 **Area:** N/A **Elevation:** 1.5 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: one cabin

Predators: coyotes and fire ants

Substrate types: shell, sand and silt

Summary: This site is located east of the GIWW, near marker 63 and is part of a four-island group. Three of the islands have been joined together with depositional material. A single large bare area is located on the east side. A cabin in disrepair is found on the south central end of the joined islands. Vegetation is typical of islands along the GIWW and includes trees, false ragweed, pigweed, camphor daisy, sea oxeye, sea lavender, grasses and halophytes.

Bird Survey 1997 – 2001

614-301C	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE					
BCNH					
GBTE					
LETE					
BLSK					

Nesting/Use History

Thirteen pair of least terns, three pair of gull-billed terns and one pair of skimmers nested here in 1973. The next observation in 1977 included least terns and skimmers on the bare ground. Eleven nests of great blue herons and four of black-crowned night-herons were recorded in 1982. Ten least terns in 1995 were the last birds to be recorded on these islands.

Discussion and Management Recommendations

Recommendations:

1. Remove the cabin before it is repaired.
2. If coyotes and raccoons were permanently removed, management actions for this island could be developed. Coyotes have been seen on this island in the last few years.

Island 614-300A**Old Name:** (65) NM59-OM29**Location**

Latitude: 27.591166 **Longitude:** -97.259746 **Area:** N/A **Elevation:** 1.2 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** remnants of one cabin**Predators:** coyotes, raccoons, fire ants and grackles**Substrate types:** sand, shell and mud

Summary: This large, round island is located east of GIWW marker 59 and opposite the junction of a channel leading to the mainland. The island has been joined with its southern neighbor through the recent deposition of material between them. In the center of the island is a large stand of leadball trees and to the east, a large Spanish dagger that often supports a nesting platform. Around these trees is a thick stand of prickly pear. The rest of the vegetation is similar to other dredged islands along the GIWW. A large bare area from the latest depositional event lies between and behind the island.

Bird Survey 1997 – 2001

614-300A	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE			2		
BCNH			6	7	
GREG					1
REEG					
CATE					
GBTE					
LETE					

Nesting/Use History

In spite of predators, the birds listed in the table (above) have attempted to nest in the trees or in the case of the terns, on the bare ground. During the early years, when only coyotes were present, nesting success was probably higher for the tree-nesters. But with the arrival of raccoons, nesting success is doubtful. Black-crowned night-herons still roost in the leadball trees during the daylight hours. The island and its trees serve as a day-roost for night-herons and a fallout, re-fueling station for tropical migrants.

Discussion and Management Recommendations

Predators limit nesting success on this island. Preventing coyotes and raccoons from reaching the island would be a monumental task. The water that separates the site from Padre Island has become shallow and predators can easily walk and swim the short distance. Also, since these islands are interconnected, predators move easily between them. Recommendations:

1. Nesting success would improve if predators were trapped for several days during the winter every year.

Island 614-300B**Old Name:** (66) HC10-OM28**Location**

Latitude: 27.592678 **Longitude:** -97.264484 **Area:** N/A **Elevation:** 1.6 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** duck blind**Predators:** fire ants**Substrate types:** sand, shell and silt

Summary: This large island is located west of the GIWW, near the junction of a channel leading to Humble Channel and a bait stand on the mainland. The crown of the island contains scattered patches of prickly pear, false ragweed, sunflower, cordgrass, *Croton*, sea oats and other grasses. Two bare areas, one on the eastern side and the other on the southwestern corner, cover about 20 percent of the island. The margins and slopes of the island contain some sea oxeye, good stands of saltgrass, shoregrass and typical halophytes. There is a duck blind on the northern side.

Bird Survey 1997 – 2001

614-300B	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE	2	12	2	5	5
TRHE					
GREG					
SNEG					
REEG	1				
ROYT					
FOTE	4		80	64	40
GBTE		14	11	20	
BLSK	1	27	3	5	
LAGU	13	24	10	56	259

Nesting/Use History

Records for this island date to 1973 and show great blue herons building platforms on the prickly pear, gull-billed terns and skimmers on the bare ground, and laughing gulls throughout the lower vegetation. The other herons and egrets came later and were not persistent, perhaps because the type of vegetation was not favored. In 1990, 40 Forster's terns appeared on the southwestern berm and have nested there almost every year since.

Discussion and Management Recommendations

This is a very good island, but could be improved. Recommendations:

1. Remove some vegetation. The false ragweed, grasses and some of the prickly pear could be eliminated. Selective removal of the halophytes would increase the bare areas benefiting terns and skimmers.
2. Establish some trees and shrubs.
3. Deposition of new, softer sand and shell would be desirable.
4. Install signs prohibiting human activity during nesting season.

Island 614–300C**Old Name:** (67) HC9**Location**

Latitude: 27.593665 **Longitude:** -97.267728 **Area:** N/A **Elevation:** 1.2 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** N/A**Predators:** fire ants**Substrate types:** sand, shell and silt

Summary: This island is located north of the channel and east of the previous island (164–300B) and is smaller and lower. The crown is covered with necklace pod, dayflower, Indian blanket, sea oat, cordgrass, widow's tear and prickly pear, which gives way to patches of sea oxeye, saltgrass, false ragweed and pigweed. A five-meter strip of halophytes surrounds this vegetation. The southern and central margins are bare sand, much of which is inundated at high tide.

Bird Survey 1997 – 2001

614-300C	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE	10	6	2	3	33
TRHE				1	1
REEG		2	1	3	4
LAGU	84	49	60	91	154

Nesting/Use History

This island has not supported the species diversity observed on the others. Evidently the lack of good bare ground has kept the terns and skimmers from nesting here. Great blue herons built platforms on the prickly pear from 1973 to 2001. Reddish egrets have done the same, but only in recent years. A single tri-colored heron has nested in the sea oxeye on nine different occasions. Beginning in 1982, laughing gulls have nested every year except 1991 and 1992. Their numbers are increasing.

Discussion and Management Recommendations

Recommendations:

1. Plant and establish native trees and shrubs.
2. Expose more bare ground on the southern side to entice terns and skimmers.

3. Install signs prohibiting human activity during nesting season.

Island 614-300D

Old Name: (68) HC8**Location**

Latitude: 27.595124 **Longitude:** -97.270392 **Area:** N/A **Elevation:** 1.2 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office**Impacts:** duck blind**Predators:** fire ants**Substrate types:** sand, shell and silt

Summary: This is the third island in the chain along the north side of the channel. It is larger than the preceding one (614-300C) and contains a small, bare area surrounded by halophytes on the western side. An oleander and a leadball tree are on the northwestern corner near a well-constructed duck blind. There are large patches of sea oxeye on the southern, central and northwestern parts of the island. The southern patch contains some large prickly pear. Around the oxeye are grasses, sedges, lantana and pigweed. The northern half of the island contains a thick stand of cordgrass around the oleander and scattered clumps of prickly pear. The center of the island is saltgrass grading into halophytes that extend around the southern margin.

Bird Survey 1997 – 2001

614-300D	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE	4	7	1	2	1
LBHE					
TRHE	8		6		3
SNEG					
REEG	5	4	4	3	4
CATE					
ROYT					
FOTE	80	48			
SOTE					
GBTE					
BLSK					
LAGU	210	182	112	196	265

Nesting/Use History

In 1973, 226 laughing gulls nested in herbaceous vegetation, 12 tri-colored herons nested on sea oxeye, 6 Caspian, 4 sooty terns and 2 royal nested on bare ground, and 2 great blue

herons nested on prickly pear. Other herons, egrets, terns and skimmers appeared in later years. Reddish egrets and Forster's terns nested more consistently in later years. Great blue herons and laughing gulls used the island almost every year.

Discussion and Management Recommendations

This is another good island that can be improved. Recommendations:

1. Plant and establish trees and shrubs.
2. Remove some of the vegetation around the bare area.
3. Install signs prohibiting human activity during nesting season.

Island 614-300E**Old Name:** (69) HC7**Location**

Latitude: 27.595811 **Longitude:** -97.273684 **Area:** N/A **Elevation:** 0.65 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** N/A**Predators:** fire ants**Substrate types:** sand, shell and silt

Summary: This is one of six islands formed to either side of a short channel extending to the north from the main channel. All are relatively small with the same substrate and similar vegetation. This island is the smallest of the group because it is eroding more rapidly. The center of the island is partly bare, as are the extensions to the south and southwest, which are subject to flooding. Vegetation is primarily sea oxeye and halophytes such as glasswort, sea purslane, sea-blite and saltwort.

Bird Survey 1997 – 2001

614-300E	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE				1	
LBHE					
TRHE	4	3	2		
SNEG					
REEG	4	4	4	1	
CATE	62	40	7		1
SOTE					
LAGU	91	140	119	56	98

Nesting/Use History

This island, like the others in the group has been a productive nesting site for herons, egrets and laughing gulls since 1976. Caspian terns occupied the central bare area in high numbers given the amount of space available in 1997 and 1998.

Discussion and Management Recommendations

These small islands have supported a diverse number of waterbirds. Recommendations:

1. All of these islands should be closely monitored.

2. Vegetation and bare ground should be controlled on islands where ground- and vegetation-nesters have been observed.
3. Remove duck blinds from all of these small islands.
4. Deposition of material and enlargement of the islands is acceptable. This particular island could be replenished with good material to arrest erosion.
5. Plant and establish trees to attract to tree-nesters.
6. Install signs prohibiting human activity during nesting season.

Island 614-300F**Old Name:** (70) HC6**Location**

Latitude: 27.597613 **Longitude:** -97.273153 **Area:** N/A **Elevation:** 1.0 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** two duck blinds**Predators:** fire ants**Substrate types:** sand, shell and silt

Summary: This is the central of three islands on the eastern side of the short channel. Bare ground on the southern part is very low and subject to inundation. The vegetation is similar to that of the other islands and includes prickly pear, dropseed grasses, saltgrass and pigweed on the summit, sea oxeye, wolfberry and halophytes around the margin. There is a dense, healthy stand of sea oxeye on the northern side. Two topless, well-constructed duck blinds are present, one on the northwestern corner and the other on the southeastern corner.

Bird Survey 1997 – 2001

614-300F	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE	2	1		1	
LBHE	6				
TRHE	12	10	2		
GREG					
SNEG					
REEG	4	10	4	1	
WFIB					
CATE		4			
LAGU	84	126	105	70	98

Nesting/Use History

Beginning in 1976, records show this island to be heavily used by herons, egrets and laughing gulls. Their numbers have greatly decreased in the last few years and this could be associated with the activity of fishermen or the duck hunters. This island is one of the few small islands on which white-faced ibis and little blue herons have nested. The only bare-ground nesters were Caspian terns.

Discussion and Management Recommendations

Recommendations:

1. The island should be closely monitored (along with the other five in this group).
2. Remove the duck blinds since they provide no substrate for herons or egrets. Human activity associated with the blinds could be a detriment.

Island 614-300G**Old Name:** (71) HC5**Location**

Latitude: 27.602248 **Longitude:** -97.270828 **Area:** N/A **Elevation:** 1.0 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** duck blind and boat**Predators:** fire ants**Substrate types:** large shell, sand and silt

Summary: This is the last island on the eastern side of the short channel. The crown of the island along the eastern end contains patches of dropseed grass, prickly pear and pigweed. The rest of the island is covered with sea oxeye, wolfberry and halophytes. There is a duck blind on the northeastern corner and an old boat on the northwestern side.

Bird Survey 1997 – 2001

614-300G	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE				1	
TRHE	1	1			1
SNEG					
REEG	1			2	
CATE					
SOTE					
LAGU	70	98	161	140	175

Nesting/Use History

Since 1980, tri-colored herons have been the most persistent large birds to nest on this island. Since 1980, great blue herons and reddish egrets have nested here ten times. Snowy, Caspian and sooty terns and egrets have nested once since that time. This island could be named Gull Island based on the number of gulls that nest here; the density of gulls is greater than any others within the immediate area.

Discussion and Management Recommendations

Recommendations:

1. Control fire ants.
2. Remove duck blind.

3. Remove laughing gulls.
4. Install signs prohibiting human activity during nesting season and monitor often.

Island 614-300H**Old Name:** (72) HC4**Location**

Latitude: 27.605639 **Longitude:** -97.272475 **Area:** N/A **Elevation:** 0.9 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** duck blind**Predators:** fire ants**Substrate types:** more shell than sand, silt

Summary: This is the northernmost island of the three that lie west of the short channel and another good island for colonial waterbirds. There is a bare area on the western side of the island and a bare point on the northwestern corner where the duck blind is located. The crown of the island contains pigweed, halophytes and sea oxeye. Halophytes, wolfberry and saltgrass form the margins of the island.

Bird Survey 1997 – 2001

614-300H	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE			1		
LBHE			1		
TRHE	6	1	4		2
SNEG					
REEG	3	2	2	1	1
CAEG					
FOTE					
GBTE					
SOTE					
BLSK					
LAGU	161	231	140	210	154

Nesting/Use History

All islands of this group are very similar in their nesting history. This island is important for a large diversity of birds. In early observations (1979 and 1980), gull-billed terns, skimmers and laughing gulls were the only nesters. Herons and egrets appeared in 1981 and have nested in fair numbers ever since. Laughing gulls have always been numerous.

Discussion and Management Recommendations

Recommendations:

1. Nesting platforms should be installed.
2. Install signs prohibiting human activity during nesting season.

Island 614-300I**Old Name:** (73) HC3**Location**

Latitude: 27.601347 **Longitude:** -97.275476 **Area:** N/A **Elevation:** 0.9 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** large duck blind**Predators:** fire ants**Substrate types:** sand, shell and silt

Summary: This is the central of three islands on the western side of the short channel. There is a large bare area on the southwestern side and another wide strip on the eastern and southern sides. The crown of the island is a long strip of prickly pear, dropseed and false ragweed. At the northern end is a small salt cedar. Surrounding this is a broad band of sea oxeeye that grades into halophytes on all sides. There is a very large duck blind at the southeastern corner of the island.

Bird Survey 1997 – 2001

614-300I	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE					
LBHE	1				
TRHE	6	5	3	2	3
SNEG					
REEG	3	3	1	2	
FOTE					
LAGU	119	49	84	126	105

Nesting/Use History

This island is similar to the previous one (614-300H) and has supported a diverse population of birds, especially herons and egrets, since counting began in 1980. Four Forster's terns were counted in 1996 and laughing gulls have been present every year in increasing numbers.

Discussion and Management Recommendations

Following the trend, the last few years have shown a reduction in the number and species of nesting birds. Recommendations:

1. This island should be carefully monitored. Management should be the same for all six of the islands in this group.

Island 614–300J

Old Name: (74) HC2

Location

Latitude: 27.597356 **Longitude:** -97.277219 **Area:** N/A **Elevation:** 1.1m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: one duck blind

Predators: none

Substrate types: sand, shell and silt

Summary: This small island is located just south of the preceding one (614–300I) and is the sixth of six islands in the group to either side of the short channel. There is a large bare area that extends from the central eastside to the northern end. Saltgrass, sea purslane, glasswort and other halophytes surround this bare area. The crown is covered with saltgrass, dropseed and widow's tear. Around this and between the halophytes is a broad band of sea oxeye. There is a duck blind on the southwestern corner.

Bird Survey 1997 – 2001

614-300J	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE	2				
LBHE					
TRHE			1		3
GREG					
SNEG					
REEG	2				3
CAEG					
CATE			18	16	70
ROYT					
FOTE	2				
LAGU	133		168	147	252

Nesting/Use History

All the islands along these channels are important to nesting of colonial waterbirds. Their history is one of continuous occupation by a great variety of birds. For example, nests of 39 tri-colored herons, 10 snowy egrets, 3 great blue herons, 2 reddish egrets and one great egret were found associated with the sea oxeye in 1982. During the same year, six royal and 42 Forster's tern nests were counted on the bare ground. Laughing gull nests (194) were

distributed throughout the low vegetation. The last few years have not been as productive as earlier ones.

Discussion and Management Recommendations

The islands are good because they are isolated from predators and are not eroding too rapidly. The nesting tenacity and diversity of the birds that return to these islands each year is significant. Duck hunters, fishermen and large numbers of laughing gulls on the island hinder their success. Duck hunters could affect early nesting by great blue herons. Fishermen's boats have been seen beached on islands in this group during the nesting season – this is probably why no birds nested in 1998. Gulls affect hatching and fledging success of herons and egrets if a disturbance occurs. Recommendations:

1. This island, and the others in the area, should be closely monitored to control the amount of quality, bare ground for nesting terns and skimmers and the quality and quantity of vegetation for the larger birds.

Island 614–300K

Old Name: (75) HC1

Location

Latitude: 27.598901 **Longitude:** -97.280609 **Area:** N/A **Elevation:** 0.0 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: none

Substrate types: sand

Summary: This is the western most island of the group that lies north of a channel connecting the GIWW with the Humble Channel and a bait stand on the mainland. It once contained low halophytes but has eroded and is now submerged during normal tides.

Bird Survey 1997 – 2001

614-300K	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
TRHE		1	submerged	submerged	submerged
FOTE					
GBTE	6/4P				
BLSK	38/19P	2/1P			
LAGU	10/7P	36/25P			

Nesting/Use History

Forster's terns, gull-billed terns and skimmers were the first recorded birds attempting to nest here (1984). These same species and laughing gulls attempted to nest intermittently until 1999 when the island was flooded. A single tri-colored heron, probably a loafer, was counted in 1998.

Discussion and Management Recommendations

Recommendations: This island should be allowed to erode away.

Island 614-300L

Old Name: (76) Pita Island

Location

Latitude: 27.602463 **Longitude:** -97.28756 **Area:** N/A **Elevation:** 4.0 m

Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: coyotes and fire ants

Substrate types: shell, sand and silt

Summary: This very large, comma-shaped island has been used as a petroleum drilling platform and pumping station for several years. The south central part of the island is diked and the pipes and other equipment lie within the dike on the partially bare ground. In recent years, vegetation has encroached on the southern and northern edges of the bare ground. Various grasses occur here including Kleberg bluestem, Johnson, buffle, coastal bermuda, dropseed, and guinea grass. The top of the dike and outer slope are covered with cordgrass, sea oxeye, false willow, mesquite, huisache and salt cedar trees. It is here that most observed wadingbirds nest, especially on the northwestern end. The elevated portion of the island grades into a low area covered with wolfberry. Typical halophytes surround the bare silt areas that may contain water and algae. The northern low area is much larger than the southern one, occupying one third of the total island. The northeastern end of this low area is bare sand that extends as a narrow fringe around the rest of the area - most terns and skimmers nest here. The tail of the comma extends to the southwest and is covered with sea oxeye, wolfberry, sea lavender, sea purslane and other common halophytes. There are many laughing gulls and a few tri-colored herons on this extension of the island.

Bird Survey 1997 – 2001

614-300L	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE	6	6	4	10	12
LBHE	3	15	40	15	16
TRHE	20	60	54	30	30
GREG	18	24	12	10	8
SNEG	28	40	25	20	26
REEG	1	2	4	5	9
CAEG	18	20	30	20	12
ROSP		4	6		12
ROYT					
WHIB			3	3	
FOTE	120	180			

614-300L	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBTE					
LETE					
SOTE					
BLSK	6	9	10	15	
LAGU	406	700	770	770	1680

Nesting/Use History

Since most human activity island has dissipated, it has become a good nesting site for wadingbirds. Early records (1973–89) indicate nesting only in the low area by royal terns, Forster's terns, gull-billed terns, skimmers and a few laughing gulls. In 1990, much of the human activity ceased and the wadingbirds moved into the trees and sea oxeye to nest. In 1997, approximately 200 wadingbirds of 8 different species nested here. Also, there was an increase in the number of laughing gulls, a trend that continues to escalate. Skimmers, gull-billed and sooty terns have attempted to nest in the sand and shell inside the dike on occasion. The other terns have used the bare sand in the western part of the low area.

Discussion and Management Recommendations

This island is good for colonial waterbirds and should be closely monitored.

Recommendations:

1. Impacts, including human activities, related to oil and gas extraction should be minimized during much of the nesting season.
2. Coyotes should be removed (tracks were found in 1998 and 1999).
3. Replace dying salt cedar with mesquite trees.
4. The variety and quantity of grasses and other plants within the diked area should be controlled.
5. Install signs around the northwestern low area to prohibit human activity as fishing boats tend to anchor in this area.
6. Census takers should exercise extreme caution when making their counts on this island.

Island 614-222A**Old Name:** (77) SC1**Location**

Latitude: 27.633061 **Longitude:** -97.244046 **Area:** N/A **Elevation:** 0.45 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** N/A**Predators:** fire ants**Substrate types:** sand and little shell

Summary: This is the largest of six islands in a group along the south side of an east-west channel from the GIWW to the Humble Channel. This island is at the junction with the GIWW and the smaller channel. It is round, very low, and has a large internal bare area shaped like a crescent on its northern and eastern side. Vegetation consists of mostly halophytes, except for a small stand of prickly pear on the southern side.

Bird Survey 1997 – 2001

614-222A	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE	2	5	2	2	1
TRHE	1			3	4
REEG			2		
CAEG					
LAGU	70	231	238	196	104

Nesting/Use History

Individual records for this island, and most of the others just south of the Kennedy Causeway, date from 1986. One to six pair of great blue herons nested on the prickly pear every year since 1986. Reddish egrets have joined them on two occasions and tri-colored heron have nested in the marginal vegetation several years. Laughing gulls, from 100 to over 300 pair, have nested every year in the halophytes around the margin of the island.

Discussion and Management Recommendations

This island, along with many in the area, is rapidly eroding because of poor site selection and foundation and exposure to high wind and wave action. The islands are not worth saving unless they could be made more attractive to laughing gulls and thereby relieve other islands from their presence. Recommendations:

1. Any measures to lure gulls to this island would be desirable.

Island 614-222B

Old Name: (78) SC2

Location

Latitude: 27.633576 **Longitude:** -97.245524 **Area:** N/A **Elevation:** 0.3 m

Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: none

Substrate types: mostly sand and silt - little shell

Summary: This is the second island in the group of six. It is small and round with a central bare area surrounded by halophytes.

Bird Survey 1997 – 2001

614-222B	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
TRHE					
REEG					
LAGU	31	70	52	52	39

Nesting/Use History

From 1986 to 1991, tri-colored herons have nested here in very small numbers. Two reddish egrets were counted in 1989. Around 100 laughing gulls have nested here every year.

Discussion and Management Recommendations

Recommendations:

1. Any measures to lure gulls to this island would be desirable.

Island 614-222C

Old Name: (79) SC3

Location

Latitude: 27.634263 **Longitude:** -97.246396 **Area:** N/A **Elevation:** 0.2 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: none

Substrate types: sand and little shell

Summary: The third island of the group. There is a large central u-shaped bare area surrounded by halophytes.

Bird Survey 1997 – 2001

614-222C	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE					
TRHE		1			
REEG		0+1			
LAGU	58/41P	120/84P	80/56P	55/38P	42/29P

Nesting/Use History

A single great blue heron and reddish egret have attempted to nest here in different years. Tri-colored herons have appeared several times. Laughing gulls, usually less than 100 have been counted every year.

Discussion and Management Recommendations

Recommendations:

1. Any measures to lure gulls to this island would be desirable.

Island 614-222D

Old Name: (80) SC4

Location

Latitude: 27.634692 **Longitude:** -97.247268 **Area:** N/A **Elevation:** 0.3 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: none

Substrate types: sand and little shell

Summary: This is the fourth island in the group of six. The island is ringed by a narrow band of halophytes inside which is a large circular bare area around a small central core of halophytes.

Bird Survey 1997 – 2001

614-222D	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
TRHE					
LAGU	42	112	70	69	64

Nesting/Use History

Several tri-colored herons nested here from 1987 to 1990. Laughing gulls have nested every year.

Discussion and Management Recommendations

The island is in a disturbed area and too small to manage for colonial waterbirds.

Recommendations:

1. Allow the island to erode away.
2. Any measures to lure gulls to this island would be desirable.

Island 614-222E**Old Name:** (81) SC5**Location**

Latitude: 27.635121 **Longitude:** -97.24826 **Area:** N/A **Elevation:** 0.25 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** N/A**Predators:** none**Substrate types:** sand and little shell

Summary: This island historically had more vegetation than it does at present. It is now reduced to a large band of halophytes, except on the southern shore where it is thinner. The central part is bare with scattered clumps of halophytes.

Bird Survey 1997 – 2001

614-222E	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
TRHE					
REEG					
CATE					48
ROYT					
LAGU	63	119	98	66	52

Nesting/Use History

Reddish egrets, royal and Caspian terns have nested here only once. Tri-colored herons appeared from 1987 to 1990 and laughing gulls were present every year.

Discussion and Management Recommendations

Like the other islands in the group, this one is eroding and there is less vegetation each year. Any attempts to manage for colonial waterbirds would be hampered because of disturbance from boats and people. Recommendations:

1. Deposition of cobble, shell and sand could be used to join several islands in this group together. This may attract black skimmers away from their attempts to nest on the causeway and provide more habitat for other colonial waterbirds.

Island 614-222F

Old Name: (82) SC6

Location

Latitude: 27.635615 **Longitude:** -97.249035 **Area:** N/A **Elevation:** 0.25 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: none

Substrate types: sand and little shell

Summary: This is the sixth of six islands in the group and is one of the smaller ones. The vegetation is halophytic and covers most of the island.

Bird Survey 1997 – 2001

614-222F	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBH					
TRHE			1	1	
REEG					
LAGU	21	52	36	32	53

Nesting/Use History

A single pair of great blue herons and reddish egrets were counted in 1989. Tri-colored herons were present from 1987 to 1990, and again in more recent years. Laughing gulls, less than 100 pair were present every year since 1986.

Discussion and Management Recommendations

This group of six islands should be left to erode away or left for laughing gulls. The islands are too exposed to human activity and lack a good foundation. Recommendations:

1. Several islands of this group could be joined together using good foundation material as “show-case islands” for public education and viewing of nesting colonial waterbirds.

Island 614-222G**Old Name:** (83) SC7**Location**

Latitude: 27.65173 **Longitude:** -97.26153 **Area:** N/A **Elevation:** 0.76 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** N/A**Predators:** fire ants**Substrate types:** large and small shell, sand and mud

Summary: This island is located just east of the Humble Channel and south of the bridge. It is fairly large and oval shaped with a wing that extends westward. A petroleum pumping facility located within five meters of the northwestern corner of the island was removed recently. There are bare areas on the southern end that grade into wolfberry. On the higher areas there is prickly pear, pigweed, and scattered patches of false ragweed. The crown supports a good stand of sea oxeye around a deposition pit. There is an extensive area of Texas bermuda and several black mangroves on the wing that extends westward toward the channel.

Bird Survey 1997 – 2001

614-222G	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE	4	6	3	1	5
TRHE					
SNEG					
REEG					1
CATE					
ROYT					
LAGU	210	294	301	322	392

Nesting/Use History

Great blue herons and laughing gulls nested every year since individual island counts began in 1986. The average heron pairs are 6 and the average gull pairs are 300. A few tri-colored herons and snowy egrets were found on several censuses. Five Caspian terns and one royal tern attempted to nest here in 1994.

Discussion and Management Recommendations

This could be a good island for colonial waterbird management because of its strong foundation. There appears to be little value in the mangroves on this or any other island in this survey area. They are not large enough to support nests and probably never will be because of their susceptibility to cold weather. Recommendations:

1. Plant trees and remove grass to enhance this site.
2. Deposition of good dredged material on the south-central part of the island may attract terns and skimmers.

Island 614-222H

Old Name: (84) SC8**Location**

Latitude: 27.646494 **Longitude:** -97.259544 **Area:** N/A **Elevation:** 0.0 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office**Impacts:** N/A**Predators:** N/A**Substrate types:** sand and some shell

Summary: This small island was located just south of the junction that connects Humble Channel with the channel that parallels the Kennedy Causeway.

Bird Survey 1997 – 2001

614-222H	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
TRHE			submerged	submerged	submerged
LAGU					

Nesting/Use History

A few laughing gulls nested here in 1987 and 1988. Also in 1988, a single pair of tri-colored herons was observed. That was the last year any birds were observed here. The island has slowly eroded and has been flooded since 1998.

Discussion and Management Recommendations

No actions are recommended for this site.

Island 614-222I

Old Name: (85) SC9-Zig-Zag

Location

Latitude: 27.636838 **Longitude:** -97.262159 **Area:** N/A **Elevation:** 1.8 m

Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: fire ants

Substrate types: oyster shell, caliche, sand and silt

Summary: This island is really a narrow road that connects five widened areas where petroleum wells were drilled. The northernmost widened area has a western extension into the channel from which vehicles and drilling gear were off-loaded. Because of the turns to the different well sites, the island has been called Zig-Zag Island. Much of the roadway between the enlarged portions is bare. The non-bare areas contain sea oxeye, wolfberry, sea purslane and glasswort. The first well site (northernmost) contains some low mesquite trees and prickly pear along its eastern margin. Sites two, three and five are covered with prickly pear and sea oxeye. Site four has large amounts of guinea grass with the prickly pear and sea oxeye.

Bird Survey 1997 – 2001

614-222I	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE	4	4	5	2	1
LBHE			1	1	1
TRHE	26	28	22	12	28
GREG			3		
SNEG	2		1		6
REEG	4	7	5	7	11
FOTE					2
GBTE	31	70	41	11	
LETE					
SOTE				3	
BLSK	85	31	7	8	14
LAGU	504	1540	1890	3500	2520

Nesting/Use History

Individual counts for this island begin in 1987 with the presence of two great blue heron and one tri-colored heron pair at site one. The great blue heron continue to nest in the mesquite

each year. Fifteen pair of skimmers nested on bare ground at site three and 805 pair of gulls nested throughout. Fair numbers of tri-colored herons and reddish egrets have been counted at site two in the prickly pear and sea oxeye. Snowy egrets, great egrets and little blue herons have appeared in small numbers, intermittently in the same areas. Gull-billed terns have often joined the skimmers on the bare ground of site three and/or site five. Forster's and least terns have appeared only once and sooty terns only twice.

Discussion and Management Recommendations

The inclination is to "leave it to the laughing gulls." Their presence here might improve conditions on another island that is good for other low-vegetation nesters. However, the foundation and vegetation are so conducive to nesting for all types of colonial waterbirds that it should be managed more aggressively. Recommendations:

1. Plant mesquite and/or granjeno trees on site one, two and four.
2. Remove some prickly pear from sites one, two and four and guinea grass from site four. Remove most of the vegetation from sites three and five, then add some sand and small shell, if available. Removal of vegetation should be done just prior to the nesting season to reduce re-growth.
3. Install signs along the length of the island prohibiting human activity from the island during nesting season.

Island 614-222J

Old Name: (86) SC10

Location

Latitude: 27.642202 **Longitude:** -97.261917 **Area:** N/A **Elevation:** 0.5 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: none

Substrate types: sand and little shell

Summary: This island is rapidly eroding. There is a small central patch of halophytes surrounded by bare sand. Another smaller island lies just to the east and the connection with this one is exposed during low tides. This island was formed when a channel was dug at right angles to one that parallels Zig-Zag Island.

Bird Survey 1997 – 2001

614-222J	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
TRHE					
CATE	2	1		40	
LAGU	20	46		21	

Nesting/Use History

A few pair of laughing gulls nested here almost every year since 1987. Caspian terns have been present in small numbers on many occasions and in 2000, 40 pair were present. There was a single tri-colored heron observed in 1988.

Discussion and Management Recommendations

The poor foundation and inaccessibility does not facilitate management. It should probably be allowed to erode away. Efforts to enhance colonial waterbird nesting habitat will have greater results on other islands.

Island 614-222K

Old Name: (87) SC10A

Location

Latitude: 27.640486 **Longitude:** -97.259058 **Area:** N/A **Elevation:** 0.3 m

Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: none

Substrate types: sand and little shell

Summary: This is a smaller and lower version of the previous island (614-222J). It lies on the same channel, but nearer Zig-Zag Island. This island was formed when a channel was dug at right angles to one that parallels Zig-Zag Island.

Bird Survey 1997 – 2001

614-222K	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
LAGU	36/25P			35/24P	

Nesting/Use History

A few laughing gulls have nested here in the last 15 years. During extreme high tides, the island can be inundated.

Discussion and Management Recommendations

Efforts to enhance colonial waterbird nesting habitat will have greater results on other islands. Therefore, the recommendation is to let this island erode away.

Island 614-222L

Old Name: (88) SC11

Location

Latitude: 27.63937 **Longitude:** -97.263807 **Area:** N/A **Elevation:** 0.3 m

Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: none

Substrate types: sand and little shell

Summary: This island lies just south of the two previous islands (614-222J and 614-222K) and east of the channel that parallels Zig-Zag Island. It is rapidly eroding, but does contain areas of halophytes in which laughing gulls nest.

Bird Survey 1997 – 2001

614-222L	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
TRHE					
GBTE	4				6
BLSK	4				40
LAGU	27	31	35	20	

Nesting/Use History

Laughing gulls have nested in small numbers almost every year since 1987. Tri-colored herons used the vegetation twice. Gull-billed terns and skimmers have nested on the bare sand twice, once in 1997 and again in 2001.

Discussion and Management Recommendations

Efforts to enhance colonial waterbird nesting habitat will have greater results on other islands. Therefore, the recommendation is to let this island erode away.

Island 614–222M

Old Name: (89) SC11A

Location

Latitude: N/A **Longitude:** N/A **Area:** N/A **Elevation:** 0.0 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: none

Substrate types: sand and silt

Summary: This very small island is located just south of the preceding one (614–222L) and east of the channel that parallels Zig-Zag Island. Low stands of halophytes were present in earlier years.

Bird Survey 1997 – 2001

614-222M	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
TRHE		submerged	submerged	submerged	submerged
LAGU					

Nesting/Use History

Laughing gulls nested here in 1987 and again in 1990. Three pair of tri-colored herons joined them in 1990. In 1998, the island was submerged and has remained so ever since.

Discussion and Management Recommendations

No actions are recommended for this site.

Island 614-222N

Old Name: (90) SC12

Location

Latitude: 27.632841 **Longitude:** -97.268047 **Area:** N/A **Elevation:** 0.3 m

Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: none

Substrate types: sand and little shell

Summary: This small island is located near the southern tip of Zig-Zag Island, beside the channel that parallels it. Halophytic vegetation is on the western rim and in the center of the island.

Bird Survey 1997 – 2001

614-222N	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
TRHE	1				
CATE					8
FOTE	2				
BLSK				6	8
LAGU	71	70	28	42	35

Nesting/Use History

Occupation of this island began in 1987 with the presence of 42 laughing gulls. They have continued to nest since then. Terns and skimmers nested later. Tri-colored herons tried nesting during several of the early years, but not after 1997.

Discussion and Management Recommendations

Recommendations:

1. Install signs prohibiting human activity during nesting season.

Island 614-2220**Old Name:** (91) SC13**Location**

Latitude: 27.628942 **Longitude:** -97.270178 **Area:** N/A **Elevation:** 0.4 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** N/A**Predators:** fire ants**Substrate types:** sand and little shell

Summary: This is another island along the channel that parallels Zig-Zag Island. It lies north of a junction with a side channel extending east and west. The composition of the island is similar to the others in this area, but not as badly eroded and the halophytes are denser.

Bird Survey 1997 – 2001

614-2220	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE					
TRHE		1			
REEG		1			
CATE		1			
BLSK					10
LAGU	140	161	175	140	56

Nesting/Use History

This is another laughing gull island. They have nested in fair numbers since 1987. The only other birds to appear more than once were tri-colored herons.

Discussion and Management Recommendations

Efforts to enhance colonial waterbird nesting habitat here will not be cost effective.

Recommendations:

1. Install signs prohibiting human activity during nesting season until the island erodes away.

Island 614-222P

Old Name: (92) SC14

Location

Latitude: 27.626495 **Longitude:** -97.271583 **Area:** N/A **Elevation:** 0.6 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: N/A

Substrate types: sand and shell

Summary: This site was formed from three deposits made between two short channels and lies south of the previous island (614-222O). The central deposit is the largest and contains more halophytes than the others. During high tide the other two islands are often inundated.

Bird Survey 1997 – 2001

614-222P	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE					
TRHE					
FOTE					
GBTE	10				
BLSK	4				
LAGU	20		46		175

Nesting/Use History

Laughing gulls are the dominant nesters. A great blue heron built a nest during one year and tri-colored herons were present during four years. Forster's and gull-billed terns have nested here in good numbers on several occasions. Their absence the past four years could be due to high water.

Discussion and Management Recommendations

Recommendations:

1. If managed, it should be for terns and skimmers with the following actions.
2. Remove some of the vegetation.
3. Install signs prohibiting human activity during nesting season.

Island 614-222Q**Old Name:** (93) SCW15**Location**

Latitude: 27.624907 **Longitude:** -97.272794 **Area:** N/A **Elevation:** 0.6 m
Length: N/A **Width:** N/A

Description**Ownership:** Texas General Land Office**Impacts:** N/A**Predators:** fire ants**Substrate types:** sand and shell

Summary: This long island is located south of the previous island (614-222P) and formed as a result of several deposits. There is a stand of prickly pear mixed with unknown grass on the crown. The rest of the vegetation consists of saltgrass, pigweed wolfberry, sea purslane and other halophytes.

Bird Survey 1997 – 2001

614-222Q	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE	6	7	1N	1	1
TRHE	9	3	2	1	1
SNEG					
REEG	10	5	2		
CATE					
FOTE					
GBTE					
BLSK		2/1P			
LAGU	112	161	147	182	98

Nesting/Use History

Since 1986, this island has resisted erosion better than others in this area. The prickly pear and grasses have provided a substrate for heron and egret nests. Most birds nested here between 1996 and 2001. The terns and skimmers used the small amount of bare ground for a few years.

Discussion and Management Recommendations

Since this island has a better foundation than others in the area and attracts various species, it should be managed. Recommendations:

1. Deposition of good dredge material would be desirable.

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2. Establish and propagate sturdier plants.
3. Install signs prohibiting human activity during nesting season.
4. Remove any fire ants present.

Island 614-222R**Old Name:** (94) SC15A**Location****Latitude:** N/A**Longitude:** N/A**Area:** N/A**Elevation:** 0.0 m**Length:** N/A**Width:** N/A**Description****Ownership:** Texas General Land Office**Impacts:** N/A**Predators:** none**Substrate types:** sand and a little shell**Summary:** This site is located near the preceding island (614-222Q) and consists of the remains of a small strip of sand that has been flooded.**Bird Survey 1997 – 2001**

614-222R	5/20/98	5/18/99	5/16/00	5/30/01
BLSK	2		almost gone	gone
LAGU	21			

Nesting/Use History

In the years that this site was exposed, a few skimmers visited this island.

Discussion and Management Recommendations

No management is required. Recommendations:

1. If deposition is placed on the adjacent island, this site should be included in the formation of the new island.

Island 614-222S

Old Name: (95) SC16

Location

Latitude: 27.625294 **Longitude:** -97.276572 **Area:** N/A **Elevation:** 0.5 m

Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: none

Substrate types: sand and shell

Summary: This low island lies west of the channel terminus associated with the preceding islands. The island is fairly round with a lower center than the perimeter. The perimeter contains most of the vegetation including sea purslane, glasswort, saltwort, shoregrass and wolfberry. Much of the central portion is bare with scattered halophytes.

Bird Survey 1997 – 2001

614-222S	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE					
TRHE		2		1	1
REEG	1				
CATE	28				
FOTE					46
GBTE	4			28	28
BLSK				2	25
LAGU	182	112		105	69

Nesting/Use History

The single great blue heron counted in 1987 was probably a loafer, since none have been counted since. Tri-colored herons have nested often and reddish egrets at least twice. During the period 1993–97, there were between 28 and 90 pair of Caspian terns nesting here. Gull-billed terns have been counted seven times, skimmers four times and Forster's terns twice. Gulls were present almost every year since 1987.

Discussion and Management Recommendations

Recommendations:

1. Manage this island for terns.
2. Keep the central area mostly bare.

3. Deposition of good material would be desirable.
4. Install signs prohibiting human activity within 100 meters of the island between April and October.

Island 614-222T

Old Name: (96) SC17

Location

Latitude: 27.62362 **Longitude:** -97.27478 **Area:** N/A **Elevation:** 0.0 m

Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: none

Substrate types: sand and little shell

Summary: The remains of this island can be seen just under the surface of the water at the end of the channel.

Bird Survey 1997 – 2001

614-222T	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
GBHE					
TRHE					
SNEG					
CATE					
GBTE					
BLSK					
LAGU					

Nesting/Use History

It appears that a variety of birds nested on this island in early years. However, there was some question concerning which island was being surveyed in this group of ten islands. In 1996, the original island listed as SC17 was flooded.

Discussion and Management Recommendations

No actions are recommended for this site.

Island 614-222U**Old Name:** (97) SC18**Location****Latitude:** 27.621903 **Longitude:** -97.272406 **Area:** N/A **Elevation:** 0.8 m**Length:** N/A **Width:** N/A**Description****Ownership:** Texas General Land Office**Impacts:** duck blind remnants**Predators:** fire ants**Substrate types:** sand and shell

Summary: This is the largest island of this group. It is very low, from 0.15 meters at the southern end to 0.8 meters at the northwestern end. Only 50 percent of the site is vegetated; at the high point there is some sea oxeye, shoregrass and wolfberry that grade into the typical halophytes. The remains of an old duck blind is found at the northwestern corner.

Bird Survey 1997 – 2001

614-222U	1997	5/20/98	5/18/99	5/16/00	5/30/01
GBHE	not surveyed				
TRHE				3	
REEG		1	2	1	
CATE		40	34	84	
ROYT		8		60	100
GBTE		1	12/8P		
LAGU		350	455	371	280

Nesting/Use History

Bird occupation of this island is similar to that of its neighbors - heron and egret species are the same and found in similar numbers. Caspian terns have nested here and royal terns have nested here only in recent years. Laughing gulls have nested here every year since 1986 and their numbers have greatly increased in the last four years.

Discussion and Management Recommendations

This has been a good island for colonial waterbirds. Recommendations:

1. Manage the island for terns with following actions.
2. The deposition of material is desirable.
3. Control vegetation in the bare areas. This might reduce the number of laughing gulls and provide more space for terns and possibly skimmers.

4. Install signs prohibiting human activity during nesting season.

Island 614-222V

Old Name: (98) SC19

Location

Latitude: 27.636881 **Longitude:** -97.271461 **Area:** N/A **Elevation:** 0.3 m

Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: none

Substrate types: sand and some shell

Summary: This small island is located west of 614-222U. Due to erosion, it is little more than a sand spit with some halophytes on the higher parts.

Bird Survey 1997 – 2001

614-222V	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
CATE					1
LAGU			submerged		70/56P

Nesting/Use History

A few laughing gulls and a single pair of Caspian terns attempted to nest here when the island is not flooded.

Discussion and Management Recommendations

Recommendations:

1. Allow the island to erode.

Island 614-222W

Old Name: (99) SC20

Location

Latitude: 27.636108 **Longitude:** -97.269717 **Area:** N/A **Elevation:** 0.4 m

Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: none

Substrate types: sand and shell

Summary: This is a low, u-shaped island with a patch of halophytes near the north central margin. There is a berm of halophytes extending to the east and west. Most of the island is bare sand.

Bird Survey 1997 – 2001

614-222W	5/19/97	5/20/98	5/18/99	5/16/00	5/30/01
CATE					18
FOTE	3				
LETE	14				
BLSK	1	10		21	
LAGU			35	36	35

Nesting/Use History

A few Caspian, gull-billed and Forster's terns have nested here once in the last 15 years. Skimmers have been counted during five of those years and laughing gulls in all but two.

Discussion and Management Recommendations

This has not been a popular island and due to its poor foundation. It will erode rapidly. The only management appropriate for this island is predicated on the deposition of good material. Recommendations:

1. If the island is rebuilt with good material, it should be managed for terns and skimmers.

Island 614-222X**Old Name:** (100) SC21**Location****Latitude:** 27.630701 **Longitude:** -97.280883 **Area:** N/A **Elevation:** 0.45 m**Length:** N/A **Width:** N/A**Description****Ownership:** Texas General Land Office**Impacts:** duck blind**Predators:** none**Substrate types:** coquina reef rock and cobble, sand and shell

Summary: This small, oval island lies just east of a bend in the southern part of the Humble Channel. There is an old duck blind on the northeastern end with a small stand of sea oxeye nearby. The rest of the vegetation is consists of halophytes.

Bird Survey 1997 – 2001

614-222X	1997	5/20/98	5/18/99	5/16/00	2001
GBHE	not surveyed		not surveyed		
TRHE					
FOTE	55				
GBTE					
BLSK	3				
LAGU	18		13	36	

Nesting/Use History

This island has been overlooked in seven of the last 15 years. Great blue herons and tri-colored herons nested in the sea oxeye in early years. Forster's terns nested on the berm, gull-billed terns and skimmers on the bare ground, and gulls in the halophytic vegetation.

Discussion and Management Recommendations

This small island has a better foundation than most in this area and could be enhanced.
Recommendations:

1. Deposit and enlarge the island with more cobble, good sand and shell to support additional species and increase nesting capacity.
2. Install signs prohibiting human activity during nesting season, regardless of any material deposition.

Island 614-222Y

Old Name: (101) SC22

Location

Latitude: 27.641473 **Longitude:** -97.267731 **Area:** N/A **Elevation:** 1.1 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: grackles and fire ants

Substrate types: coquina reef rock and cobble, large shell and sand

Summary: This small island is located on the western side of Humble Channel, near the preceding one (614-222X). The island's elevation supports a grove of leadball trees, surrounded by dense prickly pear that grade into a band of sea oxeye. Vegetation on the margins includes sea lavender, sea purslane, glasswort and some cordgrass mixed with prickly pear. There is very little bare ground.

Bird Survey 1997 – 2001

614-222Y	1997	5/20/98	5/18/99	5/16/00	2001
GBHE	not surveyed	1			not surveyed
SNEG		3			
REEG		1	1		
LAGU		42	49	26	

Nesting/Use History

This island has been surveyed eight times in the last 15 years. The 1998 results are indicative of the potential for this island in its present state. Great-tailed grackles have taken over the leadball trees as their nesting sites and drive away other birds that might nest there. The wadingbirds that have nested used the sea oxeye and prickly pear as their substrate.

Discussion and Management Recommendations

Because of its foundation and isolation, this could be a good island for herons and egrets. Recommendations:

1. Manage this island for herons and egrets.
2. Remove the grackles and some prickly pear.
3. Deposition and enlargement with good material might also entice terns and skimmers.
4. Install signs prohibiting human activity during nesting season.

Island 614-222Z

Old Name: (102) SC23**Location**

Latitude: 27.632031 **Longitude:** -97.276378 **Area:** N/A **Elevation:** 0.0 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office**Impacts:** N/A**Predators:** none**Substrate types:** sand and little shell

Summary: The remains of this island are located on the western side of the Humble Channel near the causeway bridge. The white sand substrate emerges during extremely low tides.

Bird Survey 1997 – 2001

614-222Z	1997	5/20/98	5/18/99	5/16/00	5/30/01
BLSK	not surveyed	submerged	submerged	submerged	submerged

Nesting/Use History

One pair of skimmers nested here in 1987. When the next survey was conducted in 1998, the island was submerged.

Discussion and Management Recommendations

No actions are recommended for this site.

Island 614-222AA

Old Name: (103) SC24

Location

Latitude: 27.644906 **Longitude:** -97.263904 **Area:** N/A **Elevation:** 0.0 m

Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: none

Substrate types: sand and little shell

Summary: The remains of this small island can be found west of the Humble Channel near the causeway bridge.

Bird Survey 1997 – 2001

614-222AA	1997	5/20/98	5/18/99	5/16/00	5/30/01
BLSK	not surveyed	submerged	submerged	submerged	submerged

Nesting/Use History

Ten pair of skimmers were counted here in 1987. The island was submerged when counts resumed in 1998.

Discussion and Management Recommendations

No actions are recommended for this site.

Island 614-222BB

Old Name: (104) SC25

Location

Latitude: 27.650056 **Longitude:** -97.266035 **Area:** N/A **Elevation:** 0.2 m
Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: none

Substrate types: sand and shell

Summary: This island is located at the junction of Humble Channel and another channel near the Kennedy Causeway bridge. It is larger than the previous ones and fairly round. Vegetation is halophytic and sparse.

Bird Survey 1997 – 2001

614-222BB	1997	1998	1999	5/16/00	5/30/01
GBHE	not surveyed	not surveyed	not surveyed		
FOTE					
LAGU				28	

Nesting/Use History

This island has been surveyed only five times in the last 15 years. A single great blue heron and ten Forster's terns have been counted. The other nesters have been laughing gulls.

Discussion and Management Recommendations

No actions are recommended for this site.

Island 614-222CC

Old Name: (105) SC26

Location

Latitude: 27.648425 **Longitude:** -97.261869 **Area:** N/A **Elevation:** 0.0 m

Length: N/A **Width:** N/A

Description

Ownership: Texas General Land Office

Impacts: N/A

Predators: none

Substrate types: sand and little shell

Summary: This site is located due south of the bridge over the Humble Channel. The island once contained a small amount of halophytic vegetation, but is now submerged.

Bird Survey 1997 – 2001

614-222CC	1997	5/20/98	5/18/99	5/16/00	2001
BLSK	not surveyed	2	submerged	submerged	not surveyed
LAGU		28			

Nesting/Use History

The only birds counted were two pair of laughing gulls in 1990, and gulls and skimmers in 1998. The island is now submerged.

Discussion and Management Recommendations

No actions are recommended for this site.